

# Exhibit B

**In the Matter Of:**

*In re Pork Antitrust Litigation*

---

*HAL SINGER*

*June 24, 2022*

---



	Page 1	Page 3
1	UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MINNESOTA	
2	Civil Action No. 0:18-cv-01776-JRT-HB	
3	IN RE:	
4	PORK ANTITRUST LITIGATION,	
5	/	
6		
7		
8		
9		
10		
11	DEPOSITION OF HAL SINGER	
12		
13		
14		
15	Friday, June 24, 2022 9:39 a.m. - 6:03 p.m.	
16		
17	Remote Location Via Zoom Videoconference	
18	All Parties Remote	
19		
20		
21		
22		
23		
24	Stenographically Reported By: Erica Field, FPR	
25		
	Page 2	Page 4
1	APPEARANCES:	
2	On behalf of the Plaintiff: GUSTAFSON GLUEK 120 S. 6th Street Suite 2600 Minneapolis, Minnesota 55402 (612) 333-8844	
3	BY: JOSHUA RISSMAN, ESQUIRE jrißman@gustafsongluek.com	
4	HAGENS BERMAN SOBOL SHAPIRO 715 Hearst Ave Suite 202 Berkeley, California 94710 (510) 725-3000	
5	BY: SHANA SCARLETT, ESQUIRE ABIGAIL PERSHING, ESQUIRE shanas@hbsslaw.com abigailp@hbsslaw.com	
6	NEXSEN PRUET 1230 Main Street Suite 700 Columbia, South Carolina 29201 (803) 771-8900	
7	BY: DAVID EDDY, ESQUIRE	
8	On behalf of Tyson Foods, Inc., Tyson Prepared Foods, Inc., and Tyson Fresh Meats, Inc. : AXINN, VELTROP & HARKRIDER 1901 L Street N.W. Washington, D.C. 20036 (202) 912-4700	
9	BY: KEITH HOLLERAN, ESQUIRE kholleran@axinn.com	
10	On behalf of Triumph Foods: HUSCH BLACKWELL 190 Carondelet Plaza Suite 600 St. Louis, Missouri 63015 (314) 480-1500	
11	BY: CHRISTOPHER SMITH, ESQUIRE chris.smith@huschblackwell.com	
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
1	APPEARANCES CONTINUED: On behalf of Seaboard Foods: STINSON LLP 50 South Sixth Street Suite 2600 Minneapolis, Minnesota 55402 (612) 335-1808	
2	BY: PETER SCHWINGLER, ESQUIRE peter.schwingler@stinson.com	
3	On behalf of Smithfield Foods: GIBSON DUNN 1050 Connecticut Avenue, N.W. Washington, D.C. 20036 (202) 887-3756	
4	BY: RICHARD PARKER, ESQUIRE rparker@gibsondunn.com	
5	On behalf of Clemens Food Group: KIRKLAND & ELLIS 300 North LaSalle Drive Chicago, Illinois 60654 (312) 861-2000	
6	BY: AMARTO BHATTACHARYYA, ESQUIRE amarto.bhattacharyya@kirkland.com	
7	On behalf of Hormel Foods Corporation: FAEGRE BAKER DANIELS 90 S. 7th Street Suite 2200 Minneapolis, Minnesota 55402 (612) 766-8862	
8	BY: CRAIG COLEMAN, ESQUIRE JONATHAN TODT, ESQUIRE	
9	EMILY CHOW, ESQUIRE craig.coleman@faegredrinker.com jonathan.todt@faegredrinker.com emily.chow@faegredrinker.com	
10	ALSO PRESENT: Bac Tran, Charles River Associates	
11	VIDEOGRAPHER: Jacob Figueroa	
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
1	INDEX OF PROCEEDINGS	
2	WITNESS PAGE	
3	HAL SINGER 5	
4	DIRECT EXAMINATION BY MR. COLEMAN 5	
5	CROSS-EXAMINATION BY MR. RISSMAN 342	
6	CERTIFICATE OF REPORTER 348	
7	ERRATA SHEET 349	
8		
9	EXHIBITS	
10	EXHIBIT DESCRIPTION PAGE	
11	Exhibit 1 Expert Report of Dr. Singer 6	
12	Exhibit 2 Apotex, Inc. v. Cephalon, Inc. 18	
13	Exhibit 3 Users Guide to USDA's LMR Hog 105	
14	Price Reports	
15	Exhibit 4 US Hog Marketing Contract 121	
16	Study	
17	Exhibit 5 Production-Packer Match Point 139	
18	Exhibit 6 Quick Facts, The Pork Industry 152	
19	at a Glance	
20		
21		
22		
23		
24		
25		

<p style="text-align: right;">Page 5</p> <p>1      Thereupon,      2      the proceedings began at 9:39 a.m.:      3                THE VIDEOGRAPHER: We are on the      4                record on June 24, 2022, at      5                approximately 9:39 a.m. Eastern Time      6                for the remote video deposition of Hal      7                Singer in the matter of In Re: Pork      8                Antitrust Litigation.</p> <p>9                My name is Jacob Figueroa. I'm      10         the videographer on behalf of Lexitas.      11         All appearances will be noted on      12         the stenographic record.</p> <p>13         Will the court reporter please      14         swear in the witness.</p> <p>15         Whereupon,</p> <p>16                HAL SINGER,      17         having been first duly sworn or affirmed, was      18         examined and testified as follows:</p> <p>19                THE WITNESS: I do.</p> <p>20                DIRECT EXAMINATION</p> <p>21         BY MR. COLEMAN:</p> <p>22         Q. Good morning. Can you state your      23         name for the record?</p> <p>24         A. Hal Jason Singer.</p> <p>25         Q. And just the first order of</p>	<p style="text-align: right;">Page 7</p> <p>1      appearance is in antitrust cases.      2      Q. And in those antitrust cases, how      3      many times have you submitted a report on      4      behalf of an antitrust plaintiff?</p> <p>5      A. Oh, I don't have a count. I don't      6      have a count for you.</p> <p>7      Q. Can you give me your best      8      estimate?</p> <p>9      A. Well, you want a count of the      10       cases in which I've submitted a report on      11       behalf of a plaintiff in an antitrust case?</p> <p>12       Q. And if it's easier, you can start      13       with how many times have you submitted a      14       report on behalf of an antitrust defendant?</p> <p>15       A. On at least one occasion. I think      16       that Verizon was an antitrust defendant in a      17       case that I worked on.</p> <p>18       Q. Any other cases come to mind in      19       which you submitted a report on behalf of an      20       antitrust defendant?</p> <p>21       A. Not that I can think of, no.</p> <p>22       Q. And so in every other antitrust      23       case in which you have submitted a report,      24       that report would have been on behalf of an      25       antitrust plaintiff; is that right?</p>
<p style="text-align: right;">Page 6</p> <p>1      business, we'll mark your expert report of      2      Dr. Hal Singer, which is Tab 1, as Exhibit 1.      3                (Exhibit 1 was marked for      4                identification.)</p> <p>5      MR. COLEMAN: Jacob, you could      6      leave that up, if you want.</p> <p>7      I will direct you around the      8      report if we need it or if Dr. Singer      9      needs it.</p> <p>10     BY MR. COLEMAN:</p> <p>11     Q. But I will note, Dr. Singer, on      12     Page 191 of your report, it looks like you      13     list about 50 cases in which you testified as      14     an expert since 2012. Is that right?</p> <p>15     A. I haven't counted them, but      16     that's -- since 2012, but that sounds like a      17     reasonable estimate.</p> <p>18     Q. And it appears that about half of      19     those involve antitrust claims. Is that a      20     reasonable approximation?</p> <p>21     A. I think that it's more than half.      22     I think that the only other area where my      23     practice covers is consumer protection, and      24     I've done a few there, but certainly not      25     half. So I think the vast majority of my</p>	<p style="text-align: right;">Page 8</p> <p>1      A. Correct.</p> <p>2      Q. In reviewing your experience, I      3      note that you have quite a bit of experience      4      identifying overcharges that you claim      5      resulted from antitrust misconduct; is that      6      right?</p> <p>7      A. Oh, I don't claim it. I've been      8      asked to estimate overcharges. But, yes,      9      I've done -- I've estimated overcharges in      10       many cases.</p> <p>11       Q. And do you consider identifying      12       and quantifying antitrust overcharges to be      13       an expertise of yours?</p> <p>14       A. I think that quantifying damages      15       in antitrust matters is certainly an area of      16       expertise of mine, yes.</p> <p>17       Q. And I'm specifically interested in      18       your expertise in identifying and quantifying      19       antitrust overcharges.</p> <p>20       Is that an area of your expertise?</p> <p>21       A. You keep saying "identifying." I      22       -- and I'm generally pushing back. I      23       wouldn't describe my expertise as      24       "identifying," but I'm certainly asked to      25       quantify damages that flow from an alleged</p>

<p>1 anticompetitive restraint.</p> <p>2 Q. And to quantify an antitrust 3 overcharge, the overcharge needs to exist; is 4 that fair?</p> <p>5 A. Yes. I think it's -- it goes 6 without saying that if there's no liability 7 or no violation, then there is no overcharge.</p> <p>8 Q. In how many cases have you been 9 asked to opine on antitrust overcharge caused 10 by conduct challenged under the antitrust 11 laws?</p> <p>12 MR. RISSMAN: Objection. Asked 13 and answered.</p> <p>14 A. I don't -- I don't have a count 15 for you, but I think that in every antitrust 16 matter that I've testified in, there's been 17 an allegation of a violation of the -- of the 18 antitrust laws, whether they're federal 19 antitrust laws or state antitrust laws.</p> <p>20 BY MR. COLEMAN:</p> <p>21 Q. And in all of those cases, were 22 you asked to opine on the existence and the 23 amount of an antitrust overcharge?</p> <p>24 MR. RISSMAN: Object to form.</p> <p>25 A. Not in every case. In some cases,</p>	<p>Page 9</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. And how many times has that 3 happened?</p> <p>4 A. On a handful of occasions.</p> <p>5 Q. How many times have you declined 6 to write an expert report because you were 7 unable to identify or quantify an antitrust 8 overcharge?</p> <p>9 A. Like I said, it wouldn't -- it 10 wouldn't get to that. It wouldn't get to me 11 being retained and then studying the matter 12 more and not being able to do it. I have to 13 make that determination on the front end.</p> <p>14 If I -- if I feel that there's a 15 plausible methodology that's reliable and it 16 is within my toolkit, then I will typically 17 accept the case and perform the requisite 18 analyses. The times that I've declined cases 19 is when I've decided up front that there was 20 something -- there was a problem with the 21 case.</p> <p>22 Q. And did you do that analysis in 23 this case prior to your retention?</p> <p>24 MR. RISSMAN: I'm going -- I'm 25 going to object as it's not asking for</p>
<p>1 I've been asked to opine only on matters 2 relating to liability in which the -- the 3 plaintiff has retained a separate expert to 4 do damages. I don't know if I'm going to be 5 able to cull up examples of that, but in most 6 cases, I will grant you that I'm asked to 7 examine issues relating to antitrust impact 8 and quantifying aggregate damages.</p> <p>9 BY MR. COLEMAN:</p> <p>10 Q. Have you ever declined an 11 engagement to testify because you were unable 12 to either identify or quantify an antitrust 13 overcharge?</p> <p>14 MR. RISSMAN: Object to form.</p> <p>15 A. Well, I've declined engagements 16 before, but I can't recall accepting 17 engagement and then discovering, you know, 18 midway through that I couldn't present an 19 estimate. I've -- the decision to go or 20 no-go has typically occurred at the front end 21 of the case.</p> <p>22 If I think that the case doesn't 23 conform, you know, to my understanding or my 24 practice, I would turn down the case.</p> <p>25</p>	<p>Page 10</p> <p>1 an opinion that he's given in this 2 case. It's asking for preliminary 3 analysis, and I will instruct the 4 witness not to answer.</p> <p>5 THE WITNESS: Okay.</p> <p>6 BY MR. COLEMAN:</p> <p>7 Q. So in every case in which you were 8 retained to quantify an antitrust overcharge, 9 you were able to apply your expertise to -- 10 to do so, right?</p> <p>11 A. Well, I think what you're asking 12 is tautological. I -- whenever I accepted a 13 matter, I wouldn't have done so unless I 14 thought I could apply my expertise. So when 15 you see the final product in cases that I 16 accepted, it naturally follows that I -- I 17 was able to apply my expertise.</p> <p>18 Q. I'm not sure I see the tautology 19 here, Dr. Singer. I -- it strikes you as 20 unreasonable that once you've been retained, 21 dug through the facts, looked at the data, 22 that you might realize that the facts in the 23 record lead you to be unable to quantify an 24 antitrust overcharge?</p> <p>25 MR. RISSMAN: Objection. Calls</p>

<p>1 for hypothetical.</p> <p>2 BY MR. COLEMAN:</p> <p>3 Q. Did that ever happen?</p> <p>4 MR. RISSMAN: I am sorry.</p> <p>5 Objection. Calls for</p> <p>6 hypothetical.</p> <p>7 A. When you put it that way, I can --</p> <p>8 I can conceive of that happening in a case.</p> <p>9 But I can't recall that happening in my</p> <p>10 experience; that is, I can't recall finding a</p> <p>11 case where, you know, the data were so</p> <p>12 unreliable, or there was no anticompetitive</p> <p>13 effects such that I -- I felt the need to</p> <p>14 pull out of the case. I can't -- I can't</p> <p>15 recall that happening in my experience.</p> <p>16 BY MR. COLEMAN:</p> <p>17 Q. So when you been retained, you dig</p> <p>18 into the data, and in every instance, you</p> <p>19 have been able to quantify an antitrust</p> <p>20 overcharge if asked to do so; is that right?</p> <p>21 A. Well, like I said, you're --</p> <p>22 you're skipping over a very important part,</p> <p>23 which is on the front end, if I make a</p> <p>24 determination that I'm not going to be able</p> <p>25 to -- to assess and quantify damages in a</p>	<p>Page 13</p> <p>1 witness.</p> <p>2 MR. COLEMAN: Well, he's not</p> <p>3 answering the question.</p> <p>4 MR. RISSMAN: Well, you can't</p> <p>5 interrupt him. You asked the same</p> <p>6 question over again, and so he's</p> <p>7 answered it.</p> <p>8 BY MR. COLEMAN:</p> <p>9 Q. The predicate of the question was</p> <p>10 upon retention. I didn't ask what you did</p> <p>11 before retention.</p> <p>12 MR. RISSMAN: Well, don't</p> <p>13 interrupt the witness again.</p> <p>14 MR. COLEMAN: Well, I will do it</p> <p>15 if he -- he needs to listen to the</p> <p>16 questions.</p> <p>17 MR. RISSMAN: If you are going</p> <p>18 to interrupt him, I am going to</p> <p>19 interrupt you, so it is not going to</p> <p>20 work.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. Go ahead, Dr. Singer. Please</p> <p>23 answer the question.</p> <p>24 A. Are you saying that conditional on</p> <p>25 my assessing the case during the initial</p>
<p>1 reliable way, then I will pull out of the</p> <p>2 case in that moment.</p> <p>3 So I have not had an occasion yet</p> <p>4 where I've made that determination that</p> <p>5 damages would be feasible and reliably</p> <p>6 estimated and then reversed. I haven't done</p> <p>7 that. I will grant you that.</p> <p>8 Q. Yeah. And, again, my question was</p> <p>9 upon retention, in every case in which you</p> <p>10 have been retained as an expert to quantify</p> <p>11 overcharge, you have been able to dig into</p> <p>12 the record, apply your expertise and -- and</p> <p>13 identify and then quantify an overcharge --</p> <p>14 an antitrust overcharge; is that right?</p> <p>15 MR. RISSMAN: Object to form.</p> <p>16 A. I heard the question and I think I</p> <p>17 answered it -- I think I answered it just</p> <p>18 fine the last time. I will give you the same</p> <p>19 answer, which is that you're swiping over</p> <p>20 the -- an initial assessment --</p> <p>21 (Simultaneous unreportable</p> <p>22 crosstalk.)</p> <p>23 MR. RISSMAN: Don't interrupt</p> <p>24 the witness.</p> <p>25 No, you're not interrupting the</p>	<p>Page 14</p> <p>1 screening process and accepting the matter</p> <p>2 under the belief that I would, in fact, be</p> <p>3 able to -- to offer a reliable estimate of</p> <p>4 damages?</p> <p>5 I have gone forward and completed</p> <p>6 every instance where I have been retained,</p> <p>7 but I just want -- I think that's an</p> <p>8 important element to the question, and I just</p> <p>9 want the record to be clear that I'm not</p> <p>10 going to accept a case if I don't think that</p> <p>11 having studied it, the complaint, and met</p> <p>12 with the -- with the clients, if I don't</p> <p>13 think that there's something available there</p> <p>14 for me to dig into and to apply my skills,</p> <p>15 then I will -- I will pass on the case.</p> <p>16 Q. You understand that -- the Daubert</p> <p>17 standard, right?</p> <p>18 MR. RISSMAN: Objection. Calls</p> <p>19 for a legal conclusion.</p> <p>20 A. I have an understanding of the</p> <p>21 Daubert standard, yes.</p> <p>22 BY MR. COLEMAN:</p> <p>23 Q. And it's important to you to use</p> <p>24 reliable methods and submit economic analysis</p> <p>25 that meets the Daubert standard, right?</p>

Page 17	Page 19
<p>1 A. Yes.</p> <p>2 Q. You recognize that your opinions</p> <p>3 as an expert must be based on the facts in</p> <p>4 the case, right?</p> <p>5 A. Yes.</p> <p>6 Q. And you must account for the facts</p> <p>7 in the particular industry that you're</p> <p>8 analyzing, right?</p> <p>9 A. Yes.</p> <p>10 MR. RISSMAN: Object to form.</p> <p>11 A. Yes.</p> <p>12 BY MR. COLEMAN:</p> <p>13 Q. And the opinions that you form</p> <p>14 must be the product of reliable principals</p> <p>15 and methods, right?</p> <p>16 A. Yes.</p> <p>17 Q. And in the antitrust context, it's</p> <p>18 particularly important that expert economic</p> <p>19 analysis show that claimed damages were, in</p> <p>20 fact, caused by the unlawful acts of</p> <p>21 defendants rather than other factors such as</p> <p>22 unlawful -- such as lawful competition,</p> <p>23 right?</p> <p>24 MR. RISSMAN: Object to form.</p> <p>25 A. Well, causation is an important</p>	<p>1 unlawful acts of the defendant and did not</p> <p>2 result from some other factor such as lawful</p> <p>3 competition by the defendant.</p> <p>4 Do you see that?</p> <p>5 A. Yes.</p> <p>6 Q. And you agree with that, right?</p> <p>7 MR. RISSMAN: Objection. Calls</p> <p>8 for a legal conclusion.</p> <p>9 A. Yeah, that's consistent with what</p> <p>10 I told you, that it is the burden of the</p> <p>11 plaintiff, and it's sometimes my burden</p> <p>12 depending on my assignment.</p> <p>13 But, yes, I will grant you, it's</p> <p>14 always the burden of the plaintiff to</p> <p>15 establish causation.</p> <p>16 BY MR. COLEMAN:</p> <p>17 Q. And it's important for antitrust</p> <p>18 plaintiffs and economic analysis on behalf of</p> <p>19 antitrust plaintiffs to distinguish lawful</p> <p>20 from unlawful conduct, right?</p> <p>21 MR. RISSMAN: Object to form.</p> <p>22 A. For -- for plaintiffs to establish</p> <p>23 it, yes.</p> <p>24 BY MR. COLEMAN:</p> <p>25 Q. And you understand that economic</p>
Page 18	Page 20
<p>1 element for plaintiffs. I will grant you</p> <p>2 that. But it's not always within my domain</p> <p>3 to -- to assess causation. I have been asked</p> <p>4 sometimes to estimate damages under the</p> <p>5 assumption that someone else is going to</p> <p>6 establish causation.</p> <p>7 MR. COLEMAN: Can you please</p> <p>8 pull up Tab 6 and mark it as</p> <p>9 Exhibit 2?</p> <p>10 (Exhibit 2 was marked for</p> <p>11 identification.)</p> <p>12 THE WITNESS: Okay. I've got</p> <p>13 Tab 6 here.</p> <p>14 BY MR. COLEMAN:</p> <p>15 Q. And in Tab 6 -- what's been marked</p> <p>16 as Exhibit 2 is a case captioned Apotex, Inc.</p> <p>17 v. Cephalon, Inc.</p> <p>18 You're familiar with this case,</p> <p>19 right?</p> <p>20 A. Yes.</p> <p>21 Q. And if we go to Page 15 of the</p> <p>22 document, the second paragraph starting</p> <p>23 "however," states: However, the burden is</p> <p>24 placed upon the plaintiff to show that the</p> <p>25 damage claim was, in fact, caused by the</p>	<p>1 analysis that assumes away rational economic</p> <p>2 behavior by competitors is subject to</p> <p>3 exclusion under the Daubert standard, right?</p> <p>4 MR. RISSMAN: Objection. That</p> <p>5 calls for a legal conclusion.</p> <p>6 A. Yeah. I don't think I have an</p> <p>7 opinion on that.</p> <p>8 BY MR. COLEMAN:</p> <p>9 Q. Go to Page 23 of the document.</p> <p>10 And if we highlight the paragraph that starts</p> <p>11 with "accordingly."</p> <p>12 Accordingly, because Dr. Singer's</p> <p>13 calculation two assumes a but-for world for</p> <p>14 which there is no factual support, which</p> <p>15 requires assuming away rational economic</p> <p>16 behavior by competitors and measures damages</p> <p>17 in excess of Apotex's lost profits,</p> <p>18 calculation two will be excluded.</p> <p>19 Do you see that?</p> <p>20 A. Yes.</p> <p>21 Q. Did you disagree with the Court's</p> <p>22 assessment?</p> <p>23 A. No. In fact, during my</p> <p>24 deposition, I -- they asked me -- defense</p> <p>25 counsel asked me explicitly if I thought</p>

<p>1 there was an economic basis, and I explained      2 that plaintiff's counsel had asked me to      3 calculate damages under an alternative legal      4 theory in which Apotex, the one generic that      5 did not go along with the illegal scheme, was      6 entitled to 100 percent of the ill-gotten      7 gains of all conspiring generic defendants.      8 I said during my deposition, there      9 wasn't an economic basis for that, but      10 counsel has instructed me as an alternative      11 damages methodology -- that's why it's      12 described there as calculation two -- to      13 estimate the totality of the ill-gotten gains      14 by the conspiring generic defendants, and I      15 did so.      16 And I said so in my report, and I      17 said so in my deposition. And here, the      18 judge is saying I'm not going to allow that      19 calculation in under that legal theory.      20 Q. So you agree -- you appreciate      21 that economic analysis that assumes away      22 rational economic behavior by competitors is      23 subject to exclusion under the Daubert      24 standard, right?      25 MR. RISSMAN: Objection. Calls</p>	<p>Page 21</p> <p>1 with that legal theory go away.      2 And that's -- that's the only      3 takeaway that I -- that I have from that. My      4 other opinion was accepted, and I even got to      5 testify in front of the jury on that matter.      6 BY MR. COLEMAN:      7 Q. I'm just reading what the Court      8 held, and the Court held that your analysis,      9 calculation two, is excluded because it      10 assumed away rational economic behavior by      11 competitors, right?      12 A. I think the plaintiff's theory of      13 harm -- their alternative legal theory in      14 which Apotex was entitled to 100 percent of      15 the ill-gotten gains of the conspiring      16 generic defendants was rejected, and      17 accordingly, any damages that were associated      18 with that alternative legal theory were also      19 rejected.      20 Q. Do you dispute that an expert      21 opinion in an antitrust case in order to be      22 admissible needs to separate lawful from      23 unlawful conduct?      24 MR. RISSMAN: Objection. Calls      25 for a legal conclusion. Form.</p>
<p>1 for a legal conclusion.      2 (Reporter clarification.)      3 THE WITNESS: Yeah. Let me just      4 hear it back because there was      5 something that I -- that I disagreed      6 with.      7 But let me -- is it okay if I      8 just hear back the question? Court      9 reporter, can you read it back to me?      10 (The previous question was read      11 back by the court reporter as      12 follows:      13 "QUESTION: So you agree -- you      14 appreciate that economic analysis      15 that assumes away rational economic      16 behavior by competitors is subject      17 to exclusion under the Daubert      18 standard, right?" )      19 A. I don't know if that is the      20 takeaway from this episode. So when you say      21 I appreciate -- I mean, the wisdom or the      22 knowledge that I took away from this case --      23 from this episode was that if plaintiff's      24 counsel offers a legal theory, that the Court      25 rejects, then the damages that are associated</p>	<p>Page 22</p> <p>1 A. I don't think I have an opinion on      2 the law there. But I can tell you as an      3 economist that I wanted to isolate the effect      4 of the anticompetitive conduct when      5 estimating damages, and I want to control for      6 all the other factors that could be affecting      7 prices or wages or whatever I'm trying to      8 model.      9 BY MR. COLEMAN:      10 Q. And so you recognize that a      11 model -- an economic model or economic      12 analysis that does not adequately isolate      13 unlawful conduct and distinguish it from      14 lawful conduct is problematic. It's not good      15 economics, and it's not reliable?      16 MR. RISSMAN: Object to form.      17 Hypothetical.      18 A. I mean, the way that I would put      19 it in economic parlance is that an economic      20 model, for example, a regression model, it      21 failed to control for some key omitted      22 variable that -- that better explained the      23 conduct and was well grounded in economic      24 theory and the facts of the case, that that      25 model could not be used to isolate the effect</p>

<p style="text-align: right;">Page 25</p> <p>1 of the challenged conduct on prices.</p> <p>2 BY MR. COLEMAN:</p> <p>3 Q. If a business has sound legitimate</p> <p>4 basis for a decision that is grounded and</p> <p>5 legitimate economic purposes, the economic</p> <p>6 model should not treat that as unlawful</p> <p>7 conduct, right?</p> <p>8 MR. RISSMAN: Object to form.</p> <p>9 Incomplete hypothetical.</p> <p>10 A. I don't know if I -- if I caught</p> <p>11 that one. Maybe -- maybe you could give it</p> <p>12 back to me.</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. If a business has a valid</p> <p>15 legitimate basis for its business decision</p> <p>16 that's being evaluated by an economic model,</p> <p>17 the model should not treat that decision as</p> <p>18 unlawful conduct, right?</p> <p>19 MR. RISSMAN: Same objection.</p> <p>20 A. I would say it depends on what</p> <p>21 kind of case that we are dealing with. There</p> <p>22 is some conduct, as you are aware, that is</p> <p>23 per se legal under the antitrust laws, and so</p> <p>24 it would not be a valid exercise on behalf of</p> <p>25 the plaintiff's or the defendants' expert to</p>	<p style="text-align: right;">Page 27</p> <p>1 conduct might be motivated for procompetitive</p> <p>2 reasons needs to be able to account for those</p> <p>3 efficiency justifications.</p> <p>4 And a Section 1 case, a per se</p> <p>5 violation, I don't think it is the burden of</p> <p>6 the expert to try to justify or explain away</p> <p>7 the conduct with efficiency bases.</p> <p>8 BY MR. COLEMAN:</p> <p>9 Q. So an antitrust plaintiff does not</p> <p>10 need to exclude an explanation for conduct</p> <p>11 that's grounded in legitimate business</p> <p>12 reasons?</p> <p>13 A. I think the question presumes that</p> <p>14 we are starting off with conduct that could</p> <p>15 be motivated for procompetitive reasons, and</p> <p>16 I'm questioning the premise of your question.</p> <p>17 There are many cases, including</p> <p>18 this one, in which we're dealing with a</p> <p>19 price-fixing conspiracy in which case it is</p> <p>20 not the burden of the expert to go looking</p> <p>21 for deficiency justifications. It would only</p> <p>22 be in a Section 2 case, in a single-firm</p> <p>23 monopoly case or single-firm monopsony case</p> <p>24 where we would have to distinguish</p> <p>25 anticompetitive motivations from</p>
<p style="text-align: right;">Page 26</p> <p>1 go looking for valid -- I'm trying to</p> <p>2 paraphrase what you said -- valid efficiency,</p> <p>3 justified motivation for engaging the</p> <p>4 conduct.</p> <p>5 BY MR. COLEMAN:</p> <p>6 Q. Well, we can use the language of</p> <p>7 the Apotex court, and you understand that the</p> <p>8 Apotex court referred to rational economic</p> <p>9 behavior by competitors.</p> <p>10 Do you recall that from what we</p> <p>11 read?</p> <p>12 A. Yes.</p> <p>13 Q. And you understand that concept,</p> <p>14 right?</p> <p>15 A. Yes.</p> <p>16 Q. And an economic model that treats</p> <p>17 rational economic behavior in the</p> <p>18 self-interest of a particular firm as</p> <p>19 unlawful conduct is problematic, right?</p> <p>20 MR. RISSMAN: Object to form and</p> <p>21 calls for incomplete hypothetical.</p> <p>22 A. Again, I don't think that comes</p> <p>23 from the Apotex decision, but I can say,</p> <p>24 divorced from the Apotex decision, that an</p> <p>25 economic model in a Section 2 case where</p>	<p style="text-align: right;">Page 28</p> <p>1 procompetitive motivations.</p> <p>2 Q. But you would recognize that it's</p> <p>3 not appropriate to assume collusion from</p> <p>4 behavior that is consistent with rational</p> <p>5 economic self-interest, right?</p> <p>6 MR. RISSMAN: Object to form.</p> <p>7 A. I don't know if I have an opinion</p> <p>8 about assuming collusion. I have to assume</p> <p>9 in certain parts of what I do that the</p> <p>10 challenged conduct occurred. But in a</p> <p>11 price-fixing case such as this one, as you --</p> <p>12 as you have observed in my report, I don't</p> <p>13 assume, but instead I make an assessment of</p> <p>14 whether the conduct is consistent with the</p> <p>15 conspiracy based on qualitative and</p> <p>16 quantitative factors.</p> <p>17 BY MR. COLEMAN:</p> <p>18 Q. Did you make an effort in your</p> <p>19 analysis to rule out lawful explanations for</p> <p>20 the conduct that you assess in this case?</p> <p>21 A. I think so. I think that I have a</p> <p>22 section at the end titled "Plus Factors,"</p> <p>23 which we wouldn't get to unless the Court</p> <p>24 were to determine that we had to go there.</p> <p>25 And so -- so the answer to your question is,</p>

<p style="text-align: right;">Page 29</p> <p>1 yes, I do think that I went and tried to      2 inform the plus factors based on the evidence      3 that I reviewed in this record.</p> <p>4 Q. Yeah. We'll get into this in some      5 more detail.</p> <p>6 How many times have you had an      7 opinion or analysis deemed inadmissible by a      8 court under the Daubert standard?</p> <p>9 A. I have had two exclusions -- two      10 full exclusions under the Daubert standard in      11 my career.</p> <p>12 Q. And what cases were those?</p> <p>13 A. Jimmy John's is one, and the other      14 was -- it was the Society of Reproductive --      15 ASRM, I think, is -- was the defendant, and I      16 am -- I forget what the ASRM stood for, but      17 it was Reproductive Society. It involved      18 donor eggs.</p> <p>19 Q. In how many -- Apotex was a case      20 in which the court ruled a particular      21 calculation or opinion to be inadmissible      22 under Daubert, right?</p> <p>23 A. Right. Yeah, in that case, I      24 think, I filed, you know, the standard for      25 assessing reverse payments, went up to the</p>	<p style="text-align: right;">Page 31</p> <p>1 Q. Any others come to mind?</p> <p>2 A. Oh, Yes. MacBook -- In Re:      3 MacBook Keyboard case, which is a consumer      4 protection case where the class was certified      5 around my impact model. The judge did not      6 allow an alternative model to come through.</p> <p>7 That was called a hedonic      8 progression model. And so the only -- the      9 only model that I will be able to show the      10 jury in that case is the conjoint model.</p> <p>11 Q. Did you disagree with any of those      12 decisions?</p> <p>13 A. Oh, yes.</p> <p>14 You want to tick through one by      15 one?</p> <p>16 Q. Do you disagree with them all?</p> <p>17 A. Oh, I don't know if I -- no, I      18 don't disagree with them all. That's why it      19 would be better, I think, if we -- we tick      20 through them, if you have the time, if you      21 want to know my opinion. You know, very few      22 people ever asked, but I am happy to tell you      23 which ones I agree with and which ones I      24 don't.</p> <p>25 Q. Well, let's just ask this: Do you</p>
<p style="text-align: right;">Page 30</p> <p>1 Supreme Court in the middle of may case and      2 had to go back and refile reports. I think      3 that I filed something on the order of five      4 reports, maybe a thousand pages of testimony,      5 and one calculation got excluded in that      6 case. That is right.</p> <p>7 Q. So I'm also interested in that, in      8 an instance in which a court excluded part of      9 your opinion or a particular calculation or a      10 model.</p> <p>11 How many times has that happened?</p> <p>12 A. Right. That's happened on a few      13 occasions. Let me see if I can -- you got --      14 you got the major one. I can think of --      15 when I say "major," I mean, the -- I didn't      16 consider to be a major exclusion, but -- but      17 you got the -- the important one in my      18 portfolio.</p> <p>19 I think that -- I have to think      20 back. There was -- okay. Here's one. In      21 the capacitors case, the judge ruled that I      22 could assess qualitative evidence using      23 economic criteria, but that I could not      24 assess it using the DOJ and FTC collaboration      25 guidelines.</p>	<p style="text-align: right;">Page 32</p> <p>1 acknowledge that you've made errors in your      2 analysis in any of those cases?</p> <p>3 A. Oh, no. No. Never made an error.</p> <p>4 Q. Throughout your report, you refer      5 to "Challenged Conduct." Capital C on      6 "challenged" and capital C on "conduct."</p> <p>7 What exactly was the challenged      8 conduct in this case?</p> <p>9 A. Yeah. So I summarized it in      10 Paragraph 2, and I don't think I can do it      11 better here in realtime, but I -- in broad      12 strokes, the challenged conduct is an alleged      13 price-fixing conspiracy that involved the      14 exchange of competitively sensitive      15 information through Agri Stats that served as      16 an information exchange facilitating device      17 for collusion.</p> <p>18 And so that's -- that's just my      19 on-the-fly summary of what Paragraph 2 says.</p> <p>20 Q. Okay. So there was -- there was a      21 conspiracy, and a conspiracy involves an      22 agreement among competitors, right?</p> <p>23 A. I think that could be how the law      24 interprets it. I think that economists don't      25 necessarily use the word "agreement" to</p>

Page 33	Page 34	Page 35
<p>1 explain conspiracies, but that is my      2 understanding, that the law considers an      3 agreement to be at the heart of a conspiracy.</p> <p>4 Q. Was there an agreement here?</p> <p>5 A. Well --</p> <p>6 MR. RISSMAN: Object to form.</p> <p>7 A. Yeah, I typically --</p> <p>8 MR. RISSMAN: Calls for a legal      9 conclusion.</p> <p>10 (Reporter clarification.)</p> <p>11 MR. RISSMAN: Calls for a legal      12 conclusion.</p> <p>13 A. Yeah. In my -- in my price-fixing      14 cases, I'm told by counsel that I'm not to      15 opine on the existence of an agreement. So I      16 don't. What I do instead is I assess      17 qualitative and quantitative evidence that is      18 consistent with the existence of, but I'm      19 not -- I'm not supposed to opine on whether      20 or not I believe the agreement exists.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. Coming back to what you understand      23 challenged conduct to be, which is a term      24 that you used throughout your report. You      25 think it includes a conspiracy among the</p>		<p>1 A. Well, when you say "important,"      2 I'm answering this, of course, from an      3 economic perspective, not from a legal      4 perspective, although I do understand the law      5 cares about that, too.</p> <p>6 But from an economic perspective,      7 I think that the economist, when assessing      8 the evidence, both qualitative and      9 quantitative, should be on the lookout for      10 the possibility that the information they're      11 seeing could also be consistent with tacit      12 collusion and to rule that out, and I believe      13 I've done that here.</p> <p>14 Q. You mentioned that the challenged      15 conduct -- coordination among the      16 defendants -- explicit coordination, right?</p> <p>17 A. Oh, I'm sorry. I am sorry.</p> <p>18 What's the question? I am sorry. Give it to      19 me again.</p> <p>20 Q. Well, i just want to -- we need to      21 get through what challenged conduct means.</p> <p>22 A. Right.</p> <p>23 Q. And I think as a first step, I      24 think we have established that it includes,      25 in your mind, a conspiracy, and there's</p>
	Page 34	Page 36
<p>1 defendants, right?</p> <p>2 A. Yes.</p> <p>3 Q. And how do you define      4 "conspiracy"?</p> <p>5 A. Well, I can give you an economic      6 definition. I think that I would send you to      7 the complaint to see how the plaintiffs have      8 defined a conspiracy. But an economic      9 definition of conspiracy is the notion that      10 the decision making with regard to prices and      11 output were done on a coordinated basis      12 rather than on -- on a unilateral basis and      13 done so explicitly.</p> <p>14 Q. What do you mean by "explicitly"?</p> <p>15 A. Well, what we are trying to do in      16 many of these cases is rule out what an      17 economist would call tacit collusion. And so      18 it's possible in certain industries, say,      19 that are highly concentrated -- I am just      20 thinking of a hypothetical industry where      21 firms might be able to feel their way to the      22 monopoly prices without -- without explicitly      23 coordinating.</p> <p>24 Q. Why is it important to rule out      25 tacit coordination?</p>	<p>1 coordination that was done on an explicit      2 basis, right?</p> <p>3 A. The allegation by plaintiffs is      4 that there was a price-fixing conspiracy that      5 involved the sharing of competitively      6 sensitive information through Agri Stats,      7 and, you know, if you go into the complaint,      8 they'll talk about how that agreement touched      9 many aspects of the conduct of the firms at      10 issue and how they were able to achieve a      11 reduction in output in a coordinated way.</p> <p>12 But I think that the centerpiece,      13 at least as I understand it and the way that      14 I've written up my report, is the information      15 exchange -- antitrust competitive information      16 exchange.</p> <p>17 Q. Okay. So there was an agreement      18 to exchange information through Agri Stats,      19 right?</p> <p>20 A. Well, as alleged in the complaint.      21 You know, I'm loathed to tell you that there      22 was an agreement. Whenever you ask me today      23 about whether there was an agreement, I'm      24 going to tell you that it is alleged.</p> <p>25 Q. Well, let's come back -- you used</p>	

<p style="text-align: right;">Page 37</p> <p>1 "challenged conduct" maybe dozens of times in      2 your report, and I want a definition of what      3 you meant by it.      4 So is your -- your answer is just      5 whatever happened to be in the complaint, or      6 does challenged conduct actually mean      7 something specific to you?      8 A. It means -- it means something --      9 well, I don't know if those are -- it could      10 be both, right. But I give you my best      11 understanding of the challenged conduct in      12 Paragraph 2. And so I can't do any better      13 than that here, and I've tried to paraphrase      14 what's in Paragraph 2.      15 And that's my -- that's my      16 understanding of the challenged conduct.      17 It's a price -- an alleged price-fixing      18 conspiracy.      19 Q. Well, let's step back for a      20 minute.      21 So an agreement, a conspiracy,      22 whatever, an exchange of information, is that      23 a per se violation in and of itself?      24 MR. RISSMAN: Objection. That      25 calls for a legal conclusion.</p>	<p style="text-align: right;">Page 39</p> <p>1 quantitative methods, yes.      2 Q. Does challenged conduct include      3 increasing -- defendants increasing exports      4 of pork products?      5 A. Well, if you go into the      6 complaint, you will find allegations that the      7 agreement implicated the defendants' decision      8 making with respect to exports, and there      9 were, in fact, in the record episodes of      10 coordination on the decision of how much to      11 export.      12 But I don't consider exporting to      13 be a restraint that is being challenged in      14 the case. In other words, my mandate was to      15 remove the challenged conduct, which I      16 interrupted to mean the centerpiece was this      17 price-fixing conspiracy held together by      18 information exchange.      19 In other words, no one -- no one      20 said, Dr. Singer, I want you to assume that      21 exporting is zero in the but-for world. No      22 one asked me to treat exporting as if it were      23 a restraint.      24 Now, exporting would likely fall      25 in the but-for world as you remove the</p>
<p style="text-align: right;">Page 38</p> <p>1 A. Yeah. I don't think that you want      2 to come to me for that as to how this is      3 going to be adjudicated. I mean, I feel like      4 that's ultimately going to be the Court's      5 decision as to whether or not to apply the      6 per se -- or rule of reason standard.      7 BY MR. COLEMAN:      8 Q. Is -- in your mind, is everything      9 you define as challenged conduct unlawful?      10 MR. RISSMAN: Object to form.      11 And calls for a legal conclusion.      12 A. Right. I don't have any opinions      13 with respect to what -- what is unlawful. I      14 have opinions as to whether or not the      15 conduct was anticompetitive. I can answer      16 that question, but I can't -- I can't go into      17 areas of law.      18 BY MR. COLEMAN:      19 Q. And -- well, answer that question,      20 then.      21 Is all of the challenged conduct      22 anticompetitive in economic terms?      23 A. Oh, I concluded that the      24 challenged conduct was anticompetitive using      25 both my qualitative assessment and my</p>	<p style="text-align: right;">Page 40</p> <p>1 challenged conduct. But I don't consider      2 exporting to be a restraint that I should      3 remove when modeling the but-for world.      4 Q. Yeah. So it -- just so the record      5 is clear, the but-for world is the world in      6 which there was no conspiracy or challenged      7 conduct, right?      8 A. Correct.      9 Q. So in the but-for world, we assume      10 away any unlawful coordination or any      11 challenged conduct, right?      12 A. That's fair.      13 Q. And so at least as to exports, do      14 you have an opinion in that but-for world      15 whether exports would have stayed flat or      16 would have increased?      17 A. So what I've -- what I've      18 quantified is the extent to which domestic      19 production would be -- would have been      20 greater in the but-for world absent the      21 challenged conduct.      22 What I have not done is said where      23 would that come from. Would it necessarily      24 come from exports, or would it be new supply.      25 I haven't -- I haven't -- I haven't said</p>

<p>1 that. But I think that my kind of high-level 2 opinion is that exports would be lower in the 3 but-for world but would not be zero. 4 And so, you know, I'm going back 5 and saying something earlier. No one asked 6 me to eliminate exporting in the but-for 7 world and then solve for the price effects. 8 That was not -- that was not my mandate. My 9 mandate was to remove the challenged conduct. 10 Q. We'll be able to look at some 11 numbers in a bit. 12 But I mean, you understand that 13 exports have increased year over year for 14 pork products for -- you know, going back for 15 decades now, right? 16 MR. RISSMAN: Object to form. 17 A. That's probably fair, yes. I 18 mean, just as the world economy grows, that 19 would make sense. 20 BY MR. COLEMAN: 21 Q. So do you have an opinion as to 22 whether the exports in the but-for world 23 would have increased? 24 A. Well, relative to the actual 25 world, my opinion is that exports would have</p>	<p>Page 41</p> <p>1 and liquidation. There are many different 2 mechanisms by which allegedly conspiring 3 firms could reduce domestic output. And I'm 4 also aware in the complaint, and in my 5 report, I've summarized some record evidence 6 that speaks to coordinated conduct with 7 respect to exporting. 8 But I think it's a mistake to -- 9 to focus on exporting and to treat exporting 10 as a restraint that should be eliminated in 11 the but-for world. I'm just trying to make 12 this -- you said I wasn't being clear. I'm 13 trying to be as clear as possible. 14 The restraint is an alleged 15 conspiracy to reduce domestic output and to 16 raise prices. And the way that that was 17 achieved -- the way that that was achieved 18 was through a variety of mechanisms, right, 19 that I detail in my report. And I guess I 20 will leave it as that. 21 BY MR. COLEMAN: 22 Q. So what was the underlying 23 agreement among defendants? It was to reduce 24 pork -- domestic pork supply? Is that -- is 25 that your testimony?</p>
<p>1 been smaller in the but-for world. But if 2 you drew them on a graph, they would be 3 increasing over time, no doubt, even in the 4 but-for world. 5 Q. So I want come back to your answer 6 that I'm not -- it's not clear to me, that -- 7 you said there was -- we're going back to the 8 challenged conduct and what it was. And I'm 9 trying to explain -- or understand exactly 10 what's included in challenged conduct. And I 11 think we have established that there -- you 12 think there was a conspiracy, or you assume 13 there was a conspiracy, and I want to 14 understand what the conspiracy agreed to do, 15 conspiracy to do what. 16 Was there a conspiracy to increase 17 exports of pork products? 18 MR. RISSMAN: Object to form. 19 And calls for a legal conclusion. 20 A. I think the alleged conspiracy 21 involved reducing domestic output and 22 increasing domestic prices. Now, how that 23 manifested itself could occur in many ways. 24 You know, I go into my report -- 25 talk about harvest reduction and exporting</p>	<p>Page 42</p> <p>1 MR. RISSMAN: Objection. Legal 2 conclusion. Form. 3 A. Right. So, again, I can't -- I 4 can't speak to the existence of the 5 agreement, but I can tell you my 6 understanding of the allegations in the 7 complaint was that there was a single 8 agreement among the defendants, with 9 Agri Stats working as the center piece, to 10 reduce domestic pork supply and increase 11 prices. 12 BY MR. COLEMAN: 13 Q. And the -- you talk quite a bit 14 about cartel, and you review cartel 15 literature, and I think you accuse Agri Stats 16 of doing the work of a cartel here, right? 17 A. I -- I think that my opinion is 18 that Agri Stats performed like a textbook 19 cartel, yes -- a cartel ringleader, yes. 20 Q. Okay. Are you -- did you form the 21 opinion that a cartel existed here or not? 22 MR. RISSMAN: Objection. Calls 23 for a legal conclusion. 24 A. I mean, I just told you that I 25 think that Agri Stats was -- was acting like</p>

<p>1 a cartel. But I think that my primary 2 economic opinion is that the qualitative and 3 quantitative evidence is consistent with a 4 conspiracy to inflate prices and reduce 5 domestic output.</p> <p>6 BY MR. COLEMAN:</p> <p>7 Q. And so, again, the cartel 8 agreement here, to the extent one existed, 9 was to reduce supply, and the cartel has left 10 it to the defendant firms to figure out how 11 to do that?</p> <p>12 How does this work in your mind?</p> <p>13 A. No, I don't --</p> <p>14 MR. RISSMAN: Object to form and 15 lacks foundation.</p> <p>16 A. My review of the record and the 17 qualitative evidence does not -- shows that 18 it was not left to defendants to figure it 19 out; that there was, in fact, coordination 20 with respect to how to figure it out, with 21 respect to reducing exporting, for example -- 22 sorry, increasing exporting so as to reduce 23 domestic supply.</p> <p>24 So, I guess, I reject -- I reject 25 the question respectfully, but I don't think</p>	<p>Page 45</p> <p>1 take you there right now in realtime, but I 2 think that I do, in fact, point to such 3 evidence in the report.</p> <p>4 Q. Well, we can go through -- we'll 5 go through it in some detail, but sitting 6 here, at this moment, you're not -- you can't 7 point to a single document in which two 8 defendants were in, quote/unquote, cahoots to 9 increase exports?</p> <p>10 MR. RISSMAN: Objection.</p> <p>11 Mischaracterizes testimony.</p> <p>12 A. Sitting here, I don't think I have 13 it memorized, but I have two separate 14 sections on exports, and I've -- you know, 15 I've read them a few times recently, and I 16 seem to recall an episode in which two or 17 more defendants were coordinating in their 18 export decisions.</p> <p>19 BY MR. COLEMAN:</p> <p>20 Q. Which defendants?</p> <p>21 A. Sitting here, I can't say.</p> <p>22 Q. Have you reviewed any data about 23 how much pork products any of the defendants 24 exported in any particular year?</p> <p>25 A. I believe I have, yes.</p>
<p>1 it was just left to the defendants to figure 2 it out on their own.</p> <p>3 Q. Okay. So what exactly was the 4 coordination to reduce exports?</p> <p>5 MR. RISSMAN: Same objections.</p> <p>6 A. I think that I've reviewed both 7 allegations in the complaint and record 8 evidence that's in my report under the 9 exporting section in which two or more 10 defendants were coordinating with respect to 11 their export decision making.</p> <p>12 BY MR. COLEMAN:</p> <p>13 Q. And what does "coordination" mean 14 in your mind there?</p> <p>15 A. Coordination is distinct from the 16 unilateral conduct; that is, they're reaching 17 the decision in cahoots or in coordination 18 with arrival -- horizontal arrival.</p> <p>19 Q. Can you point to a single document 20 that indicates that two defendants that 21 were -- were in, quote/unquote, cahoots when 22 making their -- a decision to export pork 23 products?</p> <p>24 A. Well, I believe I have such 25 evidence in my report. I don't know if I can</p>	<p>Page 46</p> <p>1 Q. And what data?</p> <p>2 A. Oh, I think -- I think Agri Stats 3 kept data on exports, and I also think I've 4 seen data on exports that were kept by the 5 defendants themselves.</p> <p>6 Q. Okay. So my client is Hormel. 7 How much did Hormel export in any particular 8 year?</p> <p>9 MR. RISSMAN: Object to form.</p> <p>10 A. Oh, sitting here, I can't tell 11 you.</p> <p>12 BY MR. COLEMAN:</p> <p>13 Q. Have you reviewed data showing how 14 much pork products Hormel exported?</p> <p>15 A. It's possible I have, yes, or a 16 staff member has, yes.</p> <p>17 Q. So are you familiar with the 18 concept of direct evidence of a conspiracy or 19 agreement?</p> <p>20 MR. RISSMAN: Objection. That 21 calls for a legal conclusion.</p> <p>22 A. No. No, I'm not.</p> <p>23 BY MR. COLEMAN:</p> <p>24 Q. Have you reviewed any documents in 25 which there was correspondence from one</p>

<p style="text-align: right;">Page 49</p> <p>1 defendant to another indicating that they had 2 agreed to increase exports? 3 MR. RISSMAN: I'm going to 4 object on legal conclusion, and I also 5 instruct the witness that he should 6 only testify as to things he's formed 7 an opinion on and not -- merely 8 analyzed but had not formed an opinion 9 on. 10 MR. COLEMAN: And I guess I will 11 revise the question. 12 BY MR. COLEMAN: 13 Q. In response to the -- you think 14 that there's evidence in this case indicating 15 that two or more defendants were in, 16 quote/unquote, cahoots to increase exports. 17 And I'm concerned about that. 18 It's a serious allegation. If it's true, 19 it's a crime. So you're accusing my client 20 and other defendants of crimes. 21 I want to know exactly what you're 22 talking about when you think there's evidence 23 in this case showing that two or more 24 defendants were in, quote/unquote, cahoots to 25 increase exports?</p>	<p style="text-align: right;">Page 51</p> <p>1 BY MR. COLEMAN: 2 Q. I'm just trying to understand what 3 you're talking about. 4 A. Sure. 5 Q. I looked through the record, and I 6 haven't seen it, so help me out here. 7 MR. RISSMAN: Objection. 8 Argumentative. 9 BY MR. COLEMAN: 10 Q. Go ahead. 11 A. I'm telling you what my memory is 12 of the evidence, and I also seem to recall in 13 the complaint that there was an allegation 14 that the -- that the agreement touched export 15 decision making as well. 16 I will leave it at that. 17 Q. Well, I'm interested in how we 18 would go about identifying this document in 19 which one defendant is cajoling another one. 20 How did that work in your mind? 21 A. Okay. Those are two separate 22 questions. But how we would go about it, 23 which is the first question, is I'd want to 24 go back and review the evidence that I put 25 forward in my export session.</p>
<p style="text-align: right;">Page 50</p> <p>1 MR. RISSMAN: Object to form. 2 BY MR. COLEMAN: 3 Q. As of -- as of the moment, you're 4 not able to identify to a -- a specific 5 document, right? 6 MR. RISSMAN: Object to form. 7 And long narrative. I'm not really 8 sure what the question was. 9 But if you understood it, Mr. -- 10 Dr. Singer, you can answer. 11 A. My recollection is that there's 12 evidence in my report that describes how two 13 defendants, either acting directly or via 14 Agri Stats, were coordinating and sharing 15 information or cajoling one another with 16 respect to decision making over exports. 17 BY MR. COLEMAN: 18 Q. And so that's how we would 19 identify that -- that evidence that you have 20 in mind, is that one defendant is, 21 quote/unquote, cajoling another defendant to 22 increase exports? 23 MR. RISSMAN: Objection. 24 Mischaracterizes the testimony. 25 MR. COLEMAN: I'm not.</p>	<p style="text-align: right;">Page 52</p> <p>1 I have two sections on exports, 2 and I seem to recall at least one paragraph 3 in which two or more defendants were involved 4 in the communication that concerned the 5 decision making around exporting. 6 Q. Okay. So when we come back to 7 challenged conduct -- challenged conduct, it 8 includes a conspiracy. There was a 9 conspir -- an agreement, conspiracy, whatever 10 you want to call it, to participate in 11 Agri Stats, right? 12 MR. RISSMAN: Object to form. 13 And mischaracterizes testimony in the 14 report. 15 BY MR. COLEMAN: 16 Q. Yeah. If I mischaracterize your 17 testimony, go ahead and correct me. I'm just 18 trying to understand what you mean by 19 "challenged conduct." 20 A. Sure. 21 MR. RISSMAN: Objection. Asked 22 and answered. 23 A. Sure. The challenged conduct as 24 described in Paragraph 2 is an alleged 25 agreement among defendants to reduce domestic</p>

Page 53	Page 55
<p>1 pork supply, increase prices through the use      2 of an information exchange provided by      3 Agri Stats.</p> <p>4 BY MR. COLEMAN:</p> <p>5 Q. Okay. So the conspiracy is not      6 just to -- in your mind, it's not just to      7 exchange information through Agri Stats, but      8 it is also to reduce the domestic supply of      9 pork?</p> <p>10 A. I think that the conspiracy as      11 alleged here was designed to reduce the      12 domestic supply of pork and to increase      13 domestic prices.</p> <p>14 Q. Yeah. And was there a conspiracy      15 to increase exports?</p> <p>16 MR. RISSMAN: Objection. Form.</p> <p>17 A. Yeah, I'm -- I don't offer an      18 opinion on the existence of a conspiracy or      19 the existence of an agreement. All I can      20 tell you, in my economic opinion, is that my      21 review of the qualitative factors according      22 to the criteria that economists use to      23 ascertain cartel behavior as well as the      24 quantitative evidence, the method I used to      25 assess price and output effects is all</p>	<p>1 increasing exports, in quotes, that phrase,      2 in Paragraph 2 when I complain the challenged      3 conduct. I've now -- I think I've defined it      4 for you about five times, and it's -- you      5 know, Paragraph 2 is the best I can do.      6 But, again, I will say that      7 increasing exports is an aspect or an element      8 that flowed from the challenged conduct.      9 That is the mechanism -- is one of the      10 mechanisms by which the defendants allegedly      11 were able to reduce domestic pork supply.</p> <p>12 Q. And so again -- are you not able      13 to give me a yes-or-no answer as to whether      14 increased exports fits your definition of      15 challenged conduct?</p> <p>16 MR. RISSMAN: Object to form.      17 And asked and answered.</p> <p>18 A. That's correct. I can't --      19 MR. COLEMAN: I wish it had been      20 answered.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. Is that a -- that's not subject to      23 a yes-or-no question?</p> <p>24 A. I guess there's --      25 MR. RISSMAN: Same objection.</p>
Page 54	Page 56
<p>1 pointing in the direction and consistent with      2 the existence of an agreement and the      3 existence of a conspiracy.</p> <p>4 And that's as far as I can go.</p> <p>5 BY MR. COLEMAN:</p> <p>6 Q. Did that include the conspiracy to      7 increase exports?</p> <p>8 MR. RISSMAN: Object to form.</p> <p>9 A. I think that in the complaint,      10 there's an allegation that the conspiracy      11 reached decision making with respect to      12 exporting. But I wouldn't consider that      13 aspect to be a standalone agreement. There      14 are many ways in which output -- domestic      15 output can be reduced. I go through the      16 different ways in my report.</p> <p>17 And I think the best way to      18 explain and to understand the challenged      19 conduct is a single agreement to reduce      20 domestic supply and raise domestic prices.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. Is increase in exports part of the      23 challenged conduct?</p> <p>24 MR. RISSMAN: Object to form.</p> <p>25 A. Well, I don't -- I don't include</p>	<p>1 A. Oh. It is not subject to a      2 yes-or-no answer.</p> <p>3 BY MR. COLEMAN:</p> <p>4 Q. How about the reduction in sow      5 herd by some of the defendants? Is that part      6 of your definition of challenged conduct?</p> <p>7 A. Are you talking about the      8 liquidation, for example, as another method      9 to reduce domestic supply?</p> <p>10 Q. Yes.</p> <p>11 A. So I see liquidation, harvest      12 reduction, and exporting as different      13 mechanisms by which the defendants were able      14 to effectuate the alleged conspiracy. But I      15 don't -- I don't see liquidation, for      16 example, or exporting to be a separate and      17 standalone restraint that I need to remove in      18 the but-for world.</p> <p>19 What I need to remove in the      20 but-for world is the challenged conduct; that      21 is, the agreement -- the single agreement to      22 reduce output and raise prices via sharing of      23 competitively sensitive information through      24 Agri Stats. That's what I have to remove.</p> <p>25 Q. And so at least in this context,</p>

<p style="text-align: right;">Page 57</p> <p>1 you're familiar with what an agreement is.      2 Your model accounts for an agreement among      3 defendants that -- to share information      4 through Agri Stats?      5 A. I think you're speaking of my      6 econometric model here.      7 Q. I'm -- yeah, I'm just referring to      8 the testimony you just offered, that your      9 model needs to account for and remove the      10 agreement to exchange information through      11 Agri Stats.      12 A. Well, as you know, I set the -- I      13 used a conduct variable, which is a very      14 traditional approach to estimating price      15 effects from alleged price-fixing      16 conspiracies, and I set that conduct variable      17 equal to one at a certain point in 2009, as      18 you know, because that's when Agri Stats      19 began to produce, I believe, the sales      20 report.      21 So the whole -- the whole      22 construct of the model is turning on this      23 information exchange by Agri Stats.      24 That's -- that's when I set the variable      25 equal to one.</p>	<p style="text-align: right;">Page 59</p> <p>1 sensitive information by Agri Stats.      2 So participate just kind of      3 glosses over the anticompetitive act.      4 BY MR. COLEMAN:      5 Q. Right. So there was -- all right.      6 I just want to understand your articulation      7 of what the challenged conduct was.      8 So there was an agreement to      9 reduce supply; is that right?      10 MR. RISSMAN: Objection.      11 Mischaracterizes testimony.      12 A. That's -- that's an aspect of the      13 agreement, but I think that the best way to      14 understand the agreement is -- now I've said      15 it about ten times.      16 But it's the -- the agreement is      17 to reduce domestic supply -- the alleged      18 agreement is to reduce domestic supply and to      19 increase domestic prices through the sharing      20 of competitively sensitive information by      21 Agri Stats.      22 BY MR. COLEMAN:      23 Q. And, again, coming back to the sow      24 herd reduction, was there an agreement to      25 reduce sows?</p>
<p style="text-align: right;">Page 58</p> <p>1 Q. So there was an agreement to      2 participate in Agri Stats, right?      3 A. I don't -- I don't like --      4 MR. RISSMAN: Object to form.      5 Mischaracterizes his testimony, again.      6 MR. COLEMAN: I'm literary      7 quoting from what he just said.      8 But go ahead. Go ahead. If you      9 want to --      10 MR. RISSMAN: He --      11 MR. COLEMAN: -- make your      12 testimony, that's fine.      13 A. No, I wouldn't -- I wouldn't say      14 an agreement to participate in Agri Stats.      15 That's -- that's not how I would describe the      16 challenged conduct. That's not how I've      17 defined it, you know, over the five or six      18 times you have asked me during this call --      19 during this deposition.      20 It is the agreement to suppress      21 domestic supply and to raise -- or the      22 alleged agreement, to suppress domestic      23 supply and to domestic prices was achieved      24 principally through coordination made      25 possible through the sharing of competitively</p>	<p style="text-align: right;">Page 60</p> <p>1 MR. RISSMAN: Objection.      2 A. I think the complaint alleges that      3 the agreement touched the decision making      4 with respect to liquidation. But -- and I      5 said -- I will say the same thing for      6 liquidation that I said for exporting.      7 I'm not removing liquidation in      8 the but-for world. Right. I do not set      9 liquidation to zero in the but-for world and      10 then solve for the price fix. I do not set      11 exporting to zero in the but-for world. It      12 is not a restraint along the lines of the      13 restraint that I have removed, which is the      14 sharing of competitively sensitive      15 information among the defendants via      16 Agri Stats.      17 So just to put a bow on this,      18 there will be some liquidation in the but-for      19 world. There will be some exporting in the      20 but-for world. It's not a restraint to be      21 eliminated in the but-for world when I said      22 about modeling the but-for world and the      23 challenged conduct.      24 BY MR. COLEMAN:      25 Q. So how much would sows -- the sow</p>

1 herd have been reduced in the but-for world? 2 MR. RISSMAN: I'm going to 3 instruct the witness that if he hasn't 4 formed an opinion on that, he 5 shouldn't answer. 6 BY MR. COLEMAN: 7 Q. Let's set that as a precursor. 8 Did you form an opinion on how 9 much the sow herd would have been reduced in 10 the but-for world? 11 A. I have not. I've estimated, like 12 I said, how much more domestic supply would 13 have occurred in the but-for world absent the 14 alleged conspiracy, and I have not performed 15 a decomposition as to how that output 16 increase would be achieved. 17 But I think it's reasonable to 18 infer that it would be achieved through some 19 combination of the mechanisms that were 20 employed by the defendants to reduce domestic 21 output. 22 Q. So just coming back to the basic 23 question as to whether or not you formed an 24 opinion about how much the sow herd would 25 have been reduced, if at all, in the but-for	Page 61  1 that some liquidation, of course, would occur 2 in the but-for world. Some exporting would 3 occur in the but-for world. 4 What I haven't done is, once my 5 model generates the output effect -- because 6 I understand that output effect is a 7 requisite element of the proof of 8 anticompetitive injury here. 9 What my model doesn't do is then 10 take a step forward and say, okay, of that 11 reduced output, I can tell you that X percent 12 is coming from increased exports, Y percent 13 is coming from Harvard -- harvest reduction, 14 and Z percent is coming from liquidation -- 15 came from liquidation -- increased 16 liquidation. 17 I don't do that. I don't do such 18 a decomposition. I don't think such a 19 decomposition is necessary. And I feel like 20 that is what you are getting at with this 21 question. And I just want the record to be 22 clear as to what I have done and have not 23 done. 24 Q. Well, you understand that economic 25 analysis and this kind of modeling will often
Page 62  1 world. 2 The answer is you did not form an 3 opinion on that subject; is that right? 4 A. Well, I want the record to be very 5 clear. I estimated with -- with great 6 precision, in my opinion, the extent of the 7 output reduction that could be attributed to 8 the challenged conduct. I have not performed 9 a decomposition of that output reduction 10 according to the three primary mechanisms the 11 defendants used to reduce domestic supply. 12 I have not done that. I don't 13 think such a decomposition is necessary, and 14 I will leave it at that. 15 Q. Well -- and I'm just a lawyer. 16 I'm not sure I understand what decomposition 17 is. I guess what I want to know is did your 18 model or any opinion that you formed in this 19 case allow you to assess whether sow herd 20 reductions would have occurred in the but-for 21 world? 22 A. Oh. The model doesn't tell us 23 that, but I think just economic insight 24 analysis and review of the qualitative 25 record, all the institutional details, is	Page 64  1 include a comparison of the -- you know, the 2 assumed world with the conduct that you're 3 focused on, take that and compare it to what 4 would have happened in the but-for world. 5 Right? 6 I mean, that's -- that's not a -- 7 you're familiar with that sort of economic 8 reasoning, right? 9 A. Well, I think you're describing 10 benchmarking, which is precisely what I've 11 done by comparing prices in a dirty or 12 contaminated environment with a clean 13 environment which predates the conduct 14 period. That's precisely what I've done 15 here. 16 Q. Right. But your model is not 17 delivering an answer as to what would have 18 happened to exports in the but-for world or 19 the sow herd in the but-for world, right? 20 MR. RISSMAN: Objection. Asked 21 and answered. 22 A. I think my model is giving a -- 23 can be used, as I've used it, to give an 24 estimation of the output effect going to 25 challenged conduct across the various

<p style="text-align: right;">Page 65</p> <p>1 mechanisms. But it does not provide a 2 decomposition of that output effect into the 3 three categories of -- or mechanisms that 4 were used by defendants to reduce domestic 5 supply.</p> <p>6 BY MR. COLEMAN:</p> <p>7 Q. Did you just reference three 8 mechanisms to reduce domestic supply of pork?</p> <p>9 A. Yes.</p> <p>10 Q. And so what was the third?</p> <p>11 A. Well, these were the ones that 12 I -- that I include in my report, but it's -- 13 I will show you the section. It's 14 8(C)(1)(a), and those are -- those are 15 liquidation, harvest reduction and exports.</p> <p>16 Q. Right. And exactly what was the 17 harvest reduction? Explain how that -- 18 exactly what lever was used there?</p> <p>19 MR. RISSMAN: Object to form.</p> <p>20 A. Just a second.</p> <p>21 So Paragraph 213 explains the 22 definition of harvest reduction, occurs when 23 defendants decrease the number of plant hours 24 or suspend operation so that fewer hogs would 25 be slaughtered, which temporarily decreases</p>	<p style="text-align: right;">Page 67</p> <p>1 those three levers, not a -- not a separate 2 mechanism or lever to reduce output, right?</p> <p>3 A. I think there is some overlap in 4 those, but I do think that you can -- you can 5 think about the output effects as a way of 6 moving up the demand curve from higher 7 prices. I will leave it at that.</p> <p>8 Q. Well, what -- what exactly did the 9 defendants do other than the three things we 10 have identified?</p> <p>11 A. Oh, they conspired to raise 12 prices. They alleged -- they conspired to 13 raise prices. Right. And so if you -- if 14 you -- if an information intermediary like 15 Agri Stats is providing you profit-making 16 opportunities to raise prices that you 17 wouldn't otherwise know, and you raise prices 18 because of that, the effect is going to be a 19 reduction in consumption in the US market as 20 an output effect.</p> <p>21 It really has nothing to do with, 22 you know, the three levers that we talked 23 about before.</p> <p>24 Q. Yeah. So did -- did you review 25 evidence in which two or more defendants ever</p>
<p style="text-align: right;">Page 66</p> <p>1 the domestic availability of pork products.</p> <p>2 BY MR. COLEMAN:</p> <p>3 Q. Yeah, we'll circle back to that.</p> <p>4 A. Okay.</p> <p>5 Q. And anything else that -- any 6 other conduct that you think is -- meets that 7 definition of harvest reduction in your mind?</p> <p>8 A. Well, I have a whole section that 9 describes the record evidence on harvest 10 reduction. But I think the definition I just 11 gave you is the top-line definition of what 12 harvest reduction is.</p> <p>13 Q. So we've got three levers of the 14 assumed conspiracy: increase in exports, 15 reduce in sows, harvest reductions. Anything 16 else?</p> <p>17 A. No. I would say that output will 18 also fall naturally -- just consumption in 19 the domestic market will fall naturally with 20 price increases. And so to the extent the 21 conspiracy helped elevate prices artificially 22 above competitive levels, that's a movement 23 up the demand curve and a reduction in the 24 amount of output in the US market.</p> <p>25 Q. That sounds like the effects of</p>	<p style="text-align: right;">Page 68</p> <p>1 agreed on price?</p> <p>2 A. No, I don't know what --</p> <p>3 MR. RISSMAN: Object to form.</p> <p>4 A. I don't know what you mean by 5 "agreed," but to an economist if -- if an 6 information broker is exchanging 7 competitively sensitive information across to 8 defendants, and they utilize and rely on that 9 information to effectuate a price increase 10 that otherwise would not have been possible, 11 and that is an anticompetitive price effect.</p> <p>12 Now, if you want to call it -- I 13 think -- what was the word that you were 14 trying to use -- agreement -- you know, I'm 15 not offering opinions on agreements. I'm 16 offering economic opinions. I will leave it 17 at that.</p> <p>18 BY MR. COLEMAN:</p> <p>19 Q. So when was the conspiracy formed?</p> <p>20 A. Well, the complaint --</p> <p>21 MR. RISSMAN: Object to form and 22 foundation.</p> <p>23 A. The complaint -- can you give me 24 the question again?</p> <p>25</p>

<p style="text-align: right;">Page 69</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. When was the conspiracy formed?</p> <p>3 MR. RISSMAN: Same objection.</p> <p>4 A. The complaint asserts that the</p> <p>5 conduct period began in 2009 with the release</p> <p>6 of certain Agri Stats reports, and so that's</p> <p>7 why I define the conduct variable in my model</p> <p>8 to begin in 2009.</p> <p>9 BY MR. COLEMAN:</p> <p>10 Q. And is that why you treated 2008</p> <p>11 as a preconspiracy benchmark year?</p> <p>12 A. Yes.</p> <p>13 Q. And so you understood that 2008</p> <p>14 predicated the conspiracy?</p> <p>15 MR. RISSMAN: Object to form.</p> <p>16 And calls for a legal conclusion.</p> <p>17 BY MR. COLEMAN:</p> <p>18 Q. Well, at least that's the</p> <p>19 assumption.</p> <p>20 MR. COLEMAN: I am sorry, Josh.</p> <p>21 Yeah. Go ahead.</p> <p>22 I apologize to the court</p> <p>23 reporter, too.</p> <p>24 Did you catch his objection?</p> <p>25 THE STENOGRAPHER: Yes.</p>	<p style="text-align: right;">Page 71</p> <p>1 Do you assume that there was any</p> <p>2 agreement to refrain from slaughtering all</p> <p>3 pigs available for purchase in any given</p> <p>4 year?</p> <p>5 MR. RISSMAN: I'm going to</p> <p>6 object as mischaracterizing the</p> <p>7 testimony, and object to form.</p> <p>8 A. I don't think that I make such an</p> <p>9 assumption, and, again, when use the word</p> <p>10 "agreement," the only -- the only agreement</p> <p>11 that I'm assuming away is the single</p> <p>12 agreement to reduce domestic supply and to --</p> <p>13 and to increase domestic prices -- the</p> <p>14 alleged agreement.</p> <p>15 I just want it to be -- the record</p> <p>16 to be clear. I know I've said this now five</p> <p>17 times, but I don't think there is a -- there</p> <p>18 is alleged to be a separate agreement</p> <p>19 pertaining to harvesting or distinct or</p> <p>20 separate agreement with respect to exporting.</p> <p>21 I think there's one single</p> <p>22 agreement, as I understand the complaint.</p> <p>23 BY MR. COLEMAN:</p> <p>24 Q. Are you aware of any instance in</p> <p>25 which the defendants did not slaughter all</p>
<p style="text-align: right;">Page 70</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. And so your model -- you can</p> <p>3 strike the previous question.</p> <p>4 Your model assumes that 2008 was a</p> <p>5 preconspiracy year, right?</p> <p>6 MR. RISSMAN: Object to form.</p> <p>7 A. The model does treat 2008 as a</p> <p>8 preconspiracy year. That is correct. And I</p> <p>9 recognize that I've -- there is some evidence</p> <p>10 in the record to suggest that Agri Stats had</p> <p>11 already begun, at least through its marketing</p> <p>12 campaign, to -- to move -- place the wheels</p> <p>13 in motion to form this alleged conspiracy or</p> <p>14 this cartel.</p> <p>15 And to the extent that any prices</p> <p>16 in 2008, which I've considered to be an edge</p> <p>17 year, reflect the effects of that preliminary</p> <p>18 coordination, then my benchmark -- my clean</p> <p>19 benchmark will naturally produce a</p> <p>20 conservative estimate of the price effect</p> <p>21 owing to the conspiracy.</p> <p>22 BY MR. COLEMAN:</p> <p>23 Q. So you've mentioned that harvest</p> <p>24 agreement was one of the mechanisms used to</p> <p>25 reduce the domestic supply of pork.</p>	<p style="text-align: right;">Page 72</p> <p>1 pigs that were raised domestically in a given</p> <p>2 year?</p> <p>3 A. Am I aware of such an episode? I</p> <p>4 don't know if I understand the question. All</p> <p>5 defendants or any defendant did not slaughter</p> <p>6 all pigs?</p> <p>7 Q. Yeah. We'll just break it down.</p> <p>8 I mean, I think you realize that market hogs</p> <p>9 are raised on hog farms. We sometimes call</p> <p>10 them -- refer to those hog farms as hog</p> <p>11 producers, right?</p> <p>12 A. Okay. Right.</p> <p>13 Q. And so biological lifestyle --</p> <p>14 lifecycle of hogs involves a sow farrowing a</p> <p>15 litter, right?</p> <p>16 A. Okay. That's fair.</p> <p>17 Q. And the litter is weaned, and pigs</p> <p>18 are fed to a market weight and are available</p> <p>19 for slaughter, right?</p> <p>20 A. That is fair.</p> <p>21 Q. And I'm wondering whether you have</p> <p>22 identified any instance in which defendants</p> <p>23 failed to slaughter all of the domestic hogs</p> <p>24 that were at market weight and available for</p> <p>25 slaughter?</p>

<p style="text-align: right;">Page 73</p> <p>1           MR. RISSMAN: I will just 2 instruct the witness not to -- to only 3 testify as to opinions he's offered in 4 this case.</p> <p>5       A. Yeah. I mean, sitting here, I'm 6 not aware of an occasion where they failed 7 to. I'm not even sure I understand -- I 8 understand the question. But I can't tell 9 you an instance where defendants failed or 10 did not fail. I just don't -- I don't have 11 recall on that.</p> <p>12 BY MR. COLEMAN:</p> <p>13     Q. Is that something you looked at?</p> <p>14     MR. RISSMAN: Same -- same 15 instruction. Instruct the witness not 16 to answer any questions about 17 preliminary analysis or opinions he 18 has not formed.</p> <p>19     A. I think the only opinions that I 20 formed with respect to liquidation, if that's 21 the topic that we are discussing, and maybe 22 it's not. I may be confused.</p> <p>23 BY MR. COLEMAN:</p> <p>24     Q. It's not.</p> <p>25     A. Okay. What's the topic? I'm</p>	<p>1 been slaughtered on that particular Saturday 2 are still on the farms getting bigger by the 3 day, right?</p> <p>4           MR. RISSMAN: Objection. Form. 5 Foundation.</p> <p>6           Same instruction not to offer 7 opinions -- offer testimony about 8 things you haven't formed an opinion 9 on.</p> <p>10       A. You -- the hypothetical here is 11 that they're still available on the hog farm, 12 and that seems to suggest they haven't made 13 their way to the processor yet. But I think 14 that this notion of harvest reduction is 15 agnostic as to the timing of the delivery of 16 the hog to the processing plant. Right.</p> <p>17       It could affect -- it could affect 18 output in myriad ways. It could slow down 19 hogs coming, but it could also just slow down 20 the output, the production, the processing of 21 hogs that have already came.</p> <p>22 BY MR. COLEMAN:</p> <p>23     Q. Right. And I'm trying to connect 24 the dots here. So if there's a temporary 25 reduction in slaughter, one or more</p>
<p style="text-align: right;">Page 74</p> <p>1 sorry.</p> <p>2     Q. At any given time, there's an 3 inventory of market hogs available on farms, 4 available for slaughter weights, right?</p> <p>5     A. Okay.</p> <p>6     Q. And I am wondering if you're aware 7 of any instance in which the defendants 8 collectively failed to purchase all of those 9 market hogs available for slaughter?</p> <p>10     MR. RISSMAN: I'm going to give 11 the same instruction.</p> <p>12     A. Yeah. I don't recall that being 13 alleged in the complaint, if that's what you 14 are asking.</p> <p>15 BY MR. COLEMAN:</p> <p>16     Q. And you're not -- are you aware of 17 any facts indicating that that ever happened?</p> <p>18     MR. RISSMAN: Same instruction.</p> <p>19     A. Yeah. I don't think that I've 20 come across such facts. I don't have an 21 opinion on that.</p> <p>22 BY MR. COLEMAN:</p> <p>23     Q. And so coming back to the harvest 24 issue. If a defendant doesn't run a Saturday 25 shift, some hogs -- the hogs that would have</p>	<p>1           defendants don't run a Saturday shift and 2 slaughter fewer hogs, what happens to those 3 hogs?</p> <p>4           MR. RISSMAN: Same objection. 5 Foundation.</p> <p>6       A. Well, I think lots of things could 7 happen to them, but the -- what's not 8 happening is they're not being processed and 9 put into the relevant market that we are 10 setting here, and that could generate an 11 output effect and the concomitant price 12 effect.</p> <p>13 BY MR. COLEMAN:</p> <p>14     Q. Okay. So I want -- I want to push 15 back on that.</p> <p>16       The hogs that are not slaughtered 17 on a particular Saturday still exist, right? 18 They're not slaughtered?</p> <p>19       MR. RISSMAN: Objection. Form 20 and foundation.</p> <p>21       A. They're not slaughtered, but 22 they're not being put into the market -- the 23 relevant market here.</p> <p>24 BY MR. COLEMAN:</p> <p>25       Q. Right. And are you aware of any</p>

<p>1 producers ever liquidating marketing hogs 2 because a processor wouldn't buy them? 3 MR. RISSMAN: Object to form. 4 And I will give the same instruction 5 on not offering testimony on opinions 6 you haven't formed. 7 A. I think the allegations here -- so 8 let me just make clear, the allegations here 9 are that liquidation was a strategy, or 10 lever, to use your word, that was employed by 11 defendants to reduce domestic supply. 12 And you're asking me for the -- do 13 I know of an occasion which liquidation was 14 triggered by a particular processor who had 15 slowed things down. And I don't think that 16 that -- that is what's being alleged, and I 17 don't think that's the -- consistent with the 18 evidence that I've reviewed.</p> <p>19 BY MR. COLEMAN:</p> <p>20 Q. Yeah. And in particular, there's 21 allegations about the liquidation of sows, 22 right?</p> <p>23 A. Yes.</p> <p>24 Q. And are you aware of any 25 allegations or evidence that there was</p>	<p>1 period, a liquidation of market hogs. 2 MR. RISSMAN: Yeah. I think 3 it's -- same -- same instruction.</p> <p>4 BY MR. COLEMAN:</p> <p>5 Q. Do you know of any such facts? 6 MR. RISSMAN: If you haven't 7 formed an opinion on it, I'm 8 instructing you not to answer.</p> <p>9 A. Okay. I have not formed an 10 opinion on it.</p> <p>11 MR. COLEMAN: Josh, I'm asking 12 about what facts he knows, and you're 13 instructing him not to answer.</p> <p>14 MR. RISSMAN: Well, the stip 15 very clearly says that any facts 16 considered but not relied upon in 17 forming an opinion are not -- are out 18 of bounds.</p> <p>19 BY MR. COLEMAN:</p> <p>20 Q. You did form an opinion that the 21 reduction in harvest among defendants -- the 22 alleged reduction in harvest among defendants 23 reduced supply, right?</p> <p>24 A. Yes.</p> <p>25 Q. And the particular lever you point</p>
<p>1 liquidation of market hogs? 2 MR. RISSMAN: Same objection and 3 instruction. 4 A. I have to go back through the 5 records that I reviewed and the section on 6 liquidation to see if any of it touches hogs. 7 So just sitting here, I'm not going to be 8 able to answer the question. I would have to 9 go back through my section -- through my 10 section of the report.</p> <p>11 BY MR. COLEMAN:</p> <p>12 Q. My question is whether you're 13 aware of anything. 14 Do you recall any allegations or 15 evidence, as you're sitting here today, on 16 that point?</p> <p>17 MR. RISSMAN: So if the witness 18 hasn't formed an opinion about it, I 19 will instruct him not to answer the 20 question.</p> <p>21 MR. COLEMAN: I'm asking about 22 facts, not opinion. I'm asking him, 23 is he aware of any facts or any 24 allegation that there has ever been, 25 or at least during the relevant class</p>	<p>1 to is a reduction in shifts, Saturday 2 harvest, things of that sort, right? 3 A. Correct. 4 Q. And I'm just trying to understand 5 if there was not liquidation of market hogs, 6 how can that temporary pause in the slaughter 7 reduce the domestic supply of pork? 8 A. Oh, because we are talking about 9 the supply in the relevant market, and so if 10 you're not processing the pork, you're not 11 putting it into the relevant market, that 12 reduces output, and that could have an effect 13 of prices at least in the short run. 14 Q. What's the -- what's the time 15 effect of how long a reduction in a shift or 16 a Saturday slaughter would reduce domestic 17 supply? 18 A. Well, can I ask you, are you -- 19 you want me to assume that they took out 20 Saturday operation on one Saturday or on 21 consecutive Saturdays or two months or a 22 quarter? 23 I think it would help me with the 24 hypothetical. 25 Q. It's not a hypothetical. I'm</p>

<p style="text-align: right;">Page 81</p> <p>1 asking what actually happened on the market.      2 And you formed an opinion that the reduction      3 in Saturday harvest is capable of reducing      4 supply. I want to know how that happened.      5 If all those pigs that weren't      6 harvested on a particular Saturday are on the      7 farms getting fatter by the day, how did the      8 decision to not run a Saturday shift reduce      9 the overall supply of pork?</p> <p>10 A. Well, it reduces the supply of      11 pork in the relevant market. Right. When      12 they're on the farm, they're not in the      13 relevant market. We defined the relevant      14 market here as -- as pigs that are available      15 post-processing. Processed pork for direct      16 purchasers. So while they're on the farm,      17 they're not -- they're not yet in the      18 relevant market.</p> <p>19 Q. Do you have an understanding of      20 how much weight hogs gain per day when      21 they're at market weight?</p> <p>22 A. I don't know the per day. I know      23 that they're targeting something on the order      24 of 270 pounds, but I -- but I don't know how      25 fast they're going per day.</p>	<p style="text-align: right;">Page 83</p> <p>1 those hogs at the time of slaughter, right?      2 A. I think that's fair.      3 Q. So if we are in a situation where      4 there's not a liquidation of market hogs,      5 pausing the slaughter means that those hogs      6 get bigger, right?</p> <p>7 MR. RISSMAN: Objection.</p> <p>8 Foundation.</p> <p>9 A. Well, they could, but you're also      10 asking me to assume away the liquidation that      11 apparently has occurred, so -- but for the      12 hypothetical, I can assume that liquidation      13 is not occurring.</p> <p>14 BY MR. COLEMAN:</p> <p>15 Q. Well, I thought we established      16 that you're not aware of any instance of      17 liquidation of market hogs, right?</p> <p>18 A. Oh. So I'm aware of liquidation,      19 but as to what type of pig, hog versus sow,      20 I -- you know, that I can't tell you sitting      21 here.</p> <p>22 Q. And I will be specific. So,      23 again, I went through this, but you're not      24 aware of any instance in which defendants or      25 producers in the relevant time period</p>
<p style="text-align: right;">Page 82</p> <p>1 Q. And you understand that the supply      2 of pork is a function of how many hogs are      3 slaughtered and how big those hogs are,      4 right?</p> <p>5 A. You have to specify as -- into      6 which market. Are we talking about the      7 relevant market here or an upstream market on      8 the farm?</p> <p>9 Q. I'm just talking about the supply      10 of -- the volume of the pork produced by the      11 harvest.</p> <p>12 A. From the farms?</p> <p>13 Q. Hogs are harvested, and how big      14 those hogs are, right?</p> <p>15 A. You're speaking about supply of      16 the farm at the upstream market, correct?</p> <p>17 Q. No, I'm talking about the      18 processing.</p> <p>19 A. Oh, processing. Okay.</p> <p>20 Q. Right. The slaughter of hogs, the      21 harvest of hogs.</p> <p>22 A. Okay.</p> <p>23 Q. The volume of pork produced from      24 the slaughter of hogs is a function of how      25 many hogs are slaughtered and the weight of</p>	<p style="text-align: right;">Page 84</p> <p>1 liquidated market hogs, are you?</p> <p>2 A. I'm only aware of the stuff that I      3 reviewed and relied on and made it into the      4 liquidation section of my report, and I don't      5 have perfect recall as to the decomposition      6 of the type of pig in that section sitting      7 here.</p> <p>8 MR. RISSMAN: Craig, we have      9 been going about an hour 25. Do you      10 want take a break?</p> <p>11 MR. COLEMAN: Yeah, that works.</p> <p>12 How much time do you need?</p> <p>13 THE VIDEOGRAPHER: Time is      14 11:05 a.m. Going off the record.</p> <p>15 (A brief recess was held from 11:05      16 a.m. to 11:21 a.m.)</p> <p>17 THE VIDEOGRAPHER: The time is      18 11:21 a.m. We are back on the record.</p> <p>19 BY MR. COLEMAN:</p> <p>20 Q. So your econometric model is      21 designed to control for the cost of the pig      22 itself, right?</p> <p>23 A. I mean, that's not what it's      24 designed for, but I do control for the cost      25 of the pig as one of my control variables.</p>

Page 85	Page 87
<p>1 Q. And for all hogs purchased by a 2 packer from a producer, that cost of the pig 3 to the packer is the price that the packer 4 pays to the producer, right?</p> <p>5 A. That's fair, yes.</p> <p>6 Q. And you have data from the 7 defendants showing their purchases of market 8 hogs, right?</p> <p>9 A. I believe so, yes.</p> <p>10 Q. But you did not use that data as a 11 control for the cost of pigs to the 12 defendants, did you?</p> <p>13 A. I think that's fair. I used the 14 cost to rear the pig 270 pounds as kept by 15 the Iowa researchers as my -- as my control 16 variable.</p> <p>17 Q. And that's the cost of raising the 18 pig, or at least one of the costs for raising 19 the pigs to the producer, whomever that 20 producer might be, right?</p> <p>21 A. Yes. The upstream, yes. The cost 22 incurred by the upstream producer of the pig, 23 yes.</p> <p>24 Q. And you also know that the sales 25 of pigs to packers are subject to USDA</p>	<p>1 Do you know whether the sales of 2 pigs to packers are subject to USDA mandatory 3 price reporting?</p> <p>4 A. It's possible. I've come across 5 that in the record. It's possible that one 6 of my staffers has reviewed that data, the 7 USDA data, but as you know, I used the Iowa 8 data instead as my control variable for the 9 cost of the pig.</p> <p>10 Q. Now, when you say the "Iowa data," 11 is that the Iowa State data on corn costs?</p> <p>12 A. No. Corn was just one of the 13 inputs. But if you -- if you go into the 14 section of my report, it talks about the 15 total cost of rearing a pig at 270; corn 16 being one of the inputs.</p> <p>17 Q. Are you aware of whether Iowa 18 State also produces data showing break-even 19 amounts for producers?</p> <p>20 A. Sitting here, I'm not aware of it.</p> <p>21 Q. Are you familiar with the concept 22 of a break-even amount with regard to market 23 hogs?</p> <p>24 A. You'd have to give me more context 25 than just break even. Break even in what?</p>
Page 86	Page 88
<p>1 mandatory price reporting, right?</p> <p>2 A. I don't know if I know that. I 3 may be aware of it, but just sitting here, I 4 can't vouch for that fact.</p> <p>5 Q. So you could confirm that you did 6 not look at USDA data regarding the sales 7 price of market hogs to the packers; is that 8 right?</p> <p>9 MR. RISSMAN: Objection. Goes 10 beyond the expert step.</p> <p>11 I will instruct the witness not 12 to answer.</p> <p>13 THE WITNESS: Okay.</p> <p>14 MR. COLEMAN: Well, I think he 15 testified he didn't know if it exists, 16 right?</p> <p>17 MR. RISSMAN: You asked him what 18 he looked at, and -- and the stip 19 doesn't allow you to ask about things 20 that he looked at but didn't consider 21 in forming his opinions, so objection 22 stands.</p> <p>23 BY MR. COLEMAN:</p> <p>24 Q. Let's just circle back to make 25 sure we have a clear question and answer.</p>	<p>1 In terms of profits? I don't know what -- I 2 don't know. Just by the word "break even," 3 it's not cuing me into anything.</p> <p>4 Q. Yeah. You haven't seen that term 5 used in the materials that you reviewed or 6 relied upon?</p> <p>7 A. I don't think so.</p> <p>8 Q. There is a point at which -- a 9 producer raising a pig incurs cost to raise 10 the pig, right?</p> <p>11 A. Yes.</p> <p>12 Q. And then the producer can sell 13 that pig for either the market price or a 14 contracted price, right?</p> <p>15 A. It could. I think those are two 16 ways, yes.</p> <p>17 Q. And there is a point at which the 18 producer breaks even on its costs if the 19 price is sufficient, right?</p> <p>20 MR. RISSMAN: Object to form.</p> <p>21 A. Well, there's always a price such 22 that the price just covers your incremental 23 costs, if that's what you're asking.</p> <p>24 BY MR. COLEMAN:</p> <p>25 Q. That's a basic economic concept,</p>

<p style="text-align: right;">Page 89</p> <p>1 right, that there's a point in which      2 anybody -- any firm that produces widgets or      3 whatever is making money on a marginal or      4 incremental sale, right?</p> <p>5 A. Yes. And I would just also note      6 that for a vertically integrated processor,      7 there is no price at the upstream level      8 because they're selling to themselves. But I      9 presume all of these questions are about a      10 nonvertically integrated processor, who is      11 having to actually buy from a third party.</p> <p>12 Q. Right. That's a helpful      13 clarification.</p> <p>14 You're aware that there are a      15 number of producers of market hogs in the      16 United States that are not vertically      17 integrated, right?</p> <p>18 A. Correct.</p> <p>19 Q. And for those -- are you      20 comfortable with us referring to those as      21 independent producers; that is, they're not      22 owned or controlled by a packer?</p> <p>23 A. Sure. I can use that term.</p> <p>24 Q. For those independent producers,      25 like any firm in just about any industry,</p>	<p style="text-align: right;">Page 91</p> <p>1 independent producers, right?</p> <p>2 A. I did not control for it, but I      3 did -- you know, I absolutely looked at. You      4 know, in my background section I looked at      5 the profitability of the upstream hog      6 producers, and I analyzed, you know, what      7 share of the retail and of the wholesale that      8 they were capturing and how it was falling      9 over time.</p> <p>10 So I looked at that. I certainly      11 assessed it, but it was not explicitly      12 controlled for in my econometric model.</p> <p>13 Q. If an independent hog producer      14 makes its own decision to reduce the number      15 of sows it maintains or the number of hogs it      16 raises, you agree that that should not be      17 deemed challenged conduct, right?</p> <p>18 A. I don't think that's part of the      19 challenged conduct here. If I'm      20 understanding the question correctly, it's      21 just independent upstream hog producer      22 decides to make fewer hogs. That is not --      23 that's not part of the challenged conduct, as      24 I understand it.</p> <p>25 Q. And if an independent hog producer</p>
<p style="text-align: right;">Page 90</p> <p>1 there's a point at which they -- they could      2 break even on their costs based on the price,      3 right?</p> <p>4 A. I think I will grant you that      5 there's a price at which they break even      6 depending on some relevant measure of cost,      7 yes.</p> <p>8 Q. But in any case, your -- the data      9 that -- or the variable -- your control      10 focused on the cost of raising a hog rather      11 than profitability to the farmer or the      12 producer, right?</p> <p>13 A. I think that's fair. I'm looking      14 at the cost as opposed to the profitability.      15 They're certainly going to be related, but      16 I'm using the cost as my control variable for      17 what's happening upstream.</p> <p>18 I have another control variable,      19 too. It's just -- the pig mortality rate,      20 but -- but -- that's capturing upstream      21 activity as well. But, yes, the cost      22 variable I use is the one I describe in my      23 report, the Iowa variable.</p> <p>24 Q. And you did not control for      25 profitability of hog production for</p>	<p style="text-align: right;">Page 92</p> <p>1 is losing money on every hog that it sells,      2 it's economically reasonable for that      3 producer to reduce production, right?</p> <p>4 MR. RISSMAN: Object to form.</p> <p>5 Incomplete hypothetical.</p> <p>6 A. That's not quite the shutdown rule      7 in economics. I could tell you the shutdown      8 rule, but it's a little more complicated.      9 It's whether -- whether the price goes below      10 your average variable cost. That would      11 suggest shutting down.</p> <p>12 But so long as you're making -- so      13 long as you're making contributions that are      14 paying down your fixed costs, an economist      15 would advise you to stay in business, keep      16 producing.</p> <p>17 BY MR. COLEMAN:</p> <p>18 Q. And if a hog producer makes the      19 judgment that it's economically rational for      20 it to reduce its hog production, based on      21 loss of profitability or whatever is going on      22 in the hog market, then it's economically      23 reasonable to reduce production, right?</p> <p>24 MR. RISSMAN: Object to form.</p> <p>25 A. There could be myriad reasons why</p>

<p style="text-align: right;">Page 93</p> <p>1 an independent hog farmer reduces production.      2 I will grant you that.      3 BY MR. COLEMAN:      4 Q. And why --      5 (Simultaneous unreportable      6 crosstalk.)      7 A. I'm sorry.      8 Q. Go ahead.      9 A. No. I was just going to say,      10 including your hypothetical, which is      11 profitability, yes.      12 Q. And similarly, if a hog producer      13 is not finding it profitable to raise hogs,      14 it might make the decision to engage in fewer      15 farrowings or buy fewer weaner pigs, right?      16 MR. RISSMAN: Object to form and      17 calls for incomplete hypothetical.      18 A. I just want to make sure, we are      19 still talking about the upstream hog      20 producer, and you're asking if they could      21 make a decision to buy fewer pigs themselves?      22 Is that -- is that fair?      23 Do you want to give it to me      24 again? I am sorry. I may have lost this.      25</p>	<p style="text-align: right;">Page 95</p> <p>1 ways that they can achieve an output      2 reduction. I think the ones that you name      3 are reasonable.      4 Q. Did you analyze whether there were      5 any time periods from 2009 to 2018 in which      6 it was economically sensible or rational for      7 independent producers to cut back on hog      8 production?      9 MR. RISSMAN: I'll instruct the      10 witness to only answer to the extent      11 he is offering an opinion in this      12 case.      13 BY MR. COLEMAN:      14 Q. Did you analyze that?      15 MR. RISSMAN: Same objection.      16 If you analyzed it but are not      17 offering an opinion, I'm instructing      18 you not to answer. In other words --      19 A. Okay. Well, I did not after an      20 opinion on it, so counsel is instructing me      21 not to answer it.      22 BY MR. COLEMAN:      23 Q. Do you know whether there were any      24 periods between 2009 and 2018 in which it was      25 economic rational for independent producers</p>
<p style="text-align: right;">Page 94</p> <p>1 BY MR. COLEMAN:      2 Q. Yes. Yes.      3 So in a period of unprofitability      4 where an independent producer is losing money      5 on their operation, it may be reasonable for      6 that producer to have fewer pigs on the farm,      7 right?      8 MR. RISSMAN: Object to form and      9 incomplete hypothetical.      10 A. I mean, I have to accept that      11 there are conditions under which it would      12 make sense for an independent to reduce      13 output. I mean, that's -- you're asking me      14 almost a possibility here. Of course, it's      15 possible.      16 BY MR. COLEMAN:      17 Q. And there's a number of ways for      18 an independent producer to reduce its output      19 of market hogs, including fewer farrowings,      20 buying fewer weaner pigs, just raising      21 fewer -- fewer weaned pigs, right?      22 A. Well, now you're asking me, like,      23 if I accept the predicate that its -- prices      24 have fallen below the farmer's average      25 variable costs. There are many different</p>	<p style="text-align: right;">Page 96</p> <p>1 to cut back on hog production?      2 MR. RISSMAN: Object to form.      3 Same instruction.      4 A. Oh, okay. You have seen the      5 background section of my report, and I      6 understand counsel doesn't want me to go into      7 new opinions, so I'm not going to answer it.      8 BY MR. COLEMAN:      9 Q. So you might know, but you're not      10 going to tell me?      11 A. I have to do what my counsel tells      12 me to do, and I've been instructed not to      13 answer it. I don't know what else I can say.      14 MR. RISSMAN: If you have an      15 opinion -- if you have offered an      16 opinion about it in the report, you      17 can go into it, or if you have an      18 opinion about it, you're prepared to      19 testify to, but...      20 A. I have not offered an opinion on      21 the profitability. I will leave it at that.      22 BY MR. COLEMAN:      23 Q. If you're studying the extent to      24 which decreased pork supply can be attributed      25 to the defendants in a trust misconduct,</p>

1 isn't it important to know whether 2 independent producers have their own reasons 3 for cutting back on supply? 4 A. No. And that's -- the answer is 5 no in many ways. I mean, that's not what I'm 6 studying, and even if I were studying that, 7 that wouldn't be what's important. 8 I mean, I am studying whether or 9 not there are any price effects. My 10 econometric model is studying whether there 11 are price effects that can be attributed to 12 the challenged conduct. 13 And decision making with respect 14 to upstream on supply, it could -- they could 15 be competitive. It could be monopolized. It 16 could be all sorts of things. But what we 17 are studying here is the output effects on 18 the relevant market, which is in the 19 processing market, and that's what I aimed my 20 analyses at, is what happened to the output 21 in the processing market. 22 Q. If independent producers restrict 23 the number of pigs they're raising on a farm, 24 that reduces the supply of pork, right? 25 MR. RISSMAN: Object to form.	Page 97	1 from the upstream provider -- an integrated 2 upstream provider. 3 BY MR. COLEMAN: 4 Q. So, for example, for Smithfield, 5 do you know what percentage of the hogs that 6 it slaughters were produced by its farms that 7 it owned versus purchased from independent 8 producers? 9 A. Sitting here, I don't have that 10 number, and I also don't think it would 11 effect -- even knowing it, it couldn't be 12 used in any of the calculations I did. 13 Q. And if we go through the other 14 defendants, Tyson, Hormel, et cetera, do you 15 know what percentage of any of those 16 defendants purchased -- purchased from 17 independent producers as opposed to raise 18 themselves? 19 A. Well, I know which ones are 20 vertically integrated, but I took your 21 question to mean of those that are vertically 22 integrated, you know, what percentage are 23 coming from their own versus third parties. 24 Maybe I misinterpreted the 25 question. But that -- sitting here, I can't	Page 99
1 A. That's correct. But if you 2 understand the mechanics of my output 3 assessment, it turns entirely on the price 4 effects that can be attributed to the 5 challenged conduct, so it would be impossible 6 to say that that output estimate is being 7 driven by forces that are occurring upstream. 8 BY MR. COLEMAN: 9 Q. What percentage of market hogs 10 sold -- or what percentage of hogs 11 slaughtered by the defendants were raised by 12 independent producers and sold to the 13 packers? 14 A. Sitting -- 15 Q. And, again, during the relevant 16 time period or any particular year during the 17 time period? 18 MR. RISSMAN: Object to form. 19 A. Sitting here, I don't think I have 20 an estimate for you. I know that some but 21 not all of the defendants were vertically 22 integrated into the production -- upstream 23 production of pigs. But I don't -- I don't 24 know what percentage of, say, the sales and 25 the transaction data were sourced internally	Page 98	1 tell you those splits. 2 Q. Does any defendant raise more than 3 50 percent of the hogs that it slaughters 4 itself? 5 A. Again, sitting here, I can't tell 6 you the percentage. So it's possible that 7 some are over 50, but I just can't tell you. 8 Q. So one of your -- one of the 9 allegations and part of that challenged 10 conduct is a reduction in the sow herd, 11 right? 12 MR. RISSMAN: Object to form. 13 A. I would say -- 14 (Simultaneous unreportable 15 crosstalk.) 16 BY MR. COLEMAN: 17 Q. I am trying to orient you to -- 18 because it's what I want to talk about. 19 Bit if you don't think that's part 20 of the allegations, then that's fine. 21 A. No, I wasn't -- that wasn't where 22 I was going. I just wanted to make clear 23 that there's -- my understanding of a 24 challenged conduct is that it's a single 25 restraint, and it may have touched	Page 100

<p>1 liquidation.</p> <p>2 That could have been the 3 mechanism, but there wasn't a separate 4 restraint that's being challenged that -- of 5 an agreement that only pertains to 6 liquidation. I will grant you that 7 liquidation is one of the levers by which the 8 alleged conspiracy reduced domestic supply.</p> <p>9 Q. What percentage of the sow herd in 10 the United States is owned by the defendants 11 versus independent producers?</p> <p>12 A. I -- sitting here, I don't know 13 that split.</p> <p>14 Q. And have you been able to identify 15 any barriers to an independent producer 16 expanding its sow herd in response to a 17 defendant reducing its sow herd?</p> <p>18 MR. RISSMAN: I'm going to -- if 19 the witness has an opinion about that, 20 he can offer it. But if he doesn't 21 have an opinion, I will instruct him 22 not to answer.</p> <p>23 A. Yeah. I don't have an opinion, 24 and the only entry barriers that I looked at, 25 as you know, are in the relevant market and</p>	<p>Page 101</p> <p>1 could give you a very precise estimate of the 2 duration.</p> <p>3 Q. And you are not aware of anything 4 stopping independent producers from expanding 5 their sow herd in response to cutbacks by 6 Smithfield or any other defendant, right?</p> <p>7 MR. RISSMAN: I will instruct 8 the witness to answer to the extent he 9 has an opinion about that.</p> <p>10 A. I don't have an opinion on that.</p> <p>11 BY MR. COLEMAN:</p> <p>12 Q. What's a gilt?</p> <p>13 A. I think we have -- it's a female 14 pig that has -- is not ready to deliver 15 piglets or something like that.</p> <p>16 Q. And do you know whether gilts are 17 capable of becoming sows?</p> <p>18 A. Are they incapable?</p> <p>19 Q. Capable.</p> <p>20 A. I think eventually they might be 21 capable, but I think that that is the word to 22 describe them at a certain stage of their 23 lives.</p> <p>24 Q. You don't know how long it takes 25 for a gilt to become a sow or capable of</p>
<p>1 the processing market.</p> <p>2 BY MR. COLEMAN:</p> <p>3 Q. How long does it take to produce a 4 sow that's capable of farrowing piglets?</p> <p>5 A. Sitting here, I don't know that. 6 I don't know that by memory.</p> <p>7 Q. Well, you did opine that 8 Smithfield's reduction in sows had lingering 9 effects -- long-lasting effects on the 10 marketplace, right?</p> <p>11 A. I think so. I think I made that 12 opinion, but you can take me to it. But why 13 don't we just accept it for purposes of the 14 next question.</p> <p>15 Q. And so how long could that effect 16 last in your mind?</p> <p>17 A. I -- sitting here, I don't think 18 it can tell you precisely how long it lasts. 19 I think that I have a table or figure that 20 plots kind of the suppression of the domestic 21 production over time, and I think that that 22 could be indicative of how long the effects 23 could last, if you look at how long the line 24 was below the projected.</p> <p>25 But otherwise, I don't think I</p>	<p>Page 102</p> <p>1 becoming a sow?</p> <p>2 A. I've -- I've read that -- I've 3 read that, I'm sure, in putting together the 4 background section, but I can't give you that 5 statistic off the top of my head.</p> <p>6 Q. Do you know anything about 7 Smithfield's inventory or Tyson's inventory 8 of gilts on their farms when they liquidated 9 sows?</p> <p>10 A. Sitting here, no, I can't give you 11 a characterization of that.</p> <p>12 Q. Do you know anything about 13 circovirus?</p> <p>14 A. No, I've studied other viruses. 15 But circa virus?</p> <p>16 Q. Circovirus?</p> <p>17 A. Oh, circovirus. I looked at two 18 other viruses, but not circo, I don't think.</p> <p>19 Q. Do you know whether circovirus and 20 the vaccine to reduce or eliminate circovirus 21 had any impact on supply during the relevant 22 time period?</p> <p>23 A. No, but to the extent that it 24 affected the pig mortality rate, it would be 25 controlled for in my pig mortality variable,</p>

<p style="text-align: right;">Page 105</p> <p>1 but I don't know enough about that virus.      2 Q. You understand that pig diseases      3 can have significant impacts on the supply of      4 hogs and ultimately the supply of pork,      5 right?      6 A. Correct.      7 Q. Could you turn to Tab 62?      8 MR. RISSMAN: Give me just a      9 second because it's in the back of      10 this.      11 MR. COLEMAN: I had the same      12 problem. The binder is it too big.      13 Jacob, you could go ahead and      14 call it up on the screen.      15 BY MR. COLEMAN:      16 Q. Are you with me?      17 A. Yes.      18 Q. And what's been marked as      19 Exhibit 3 is a USDA report with the title      20 "Users Guide to USDA's LMR Hog Price      21 Reports," right?      22 (Exhibit 3 was marked for      23 identification.)      24 A. Yes.      25 BY MR. COLEMAN:</p>	<p style="text-align: right;">Page 107</p> <p>1 A. Yes.      2 Q. And does that help you with your      3 understanding that sales of hogs to packers      4 are subject to USDA mandatory price      5 reporting?      6 A. That is an inference you could      7 make from that. It doesn't say that in the      8 text, but I think it's a fair inference that      9 you could make.      10 Q. Did you read this?      11 A. I've read portions of it, not the      12 entire thing, but I've -- the portion that      13 you just had me read does not say it's a      14 requirement that you report your sales to      15 USDA. It's an inference you're making.      16 Q. Do you know what mandatory price      17 reporting is?      18 A. Well, from the phrase "mandatory      19 price reporting," it would imply that price      20 reporting is compelled. It's mandatory.      21 Q. You're inferring that from my use      22 of the phrase and not your knowledge of what      23 it actually is?      24 MR. RISSMAN: Object to form.      25</p>
<p style="text-align: right;">Page 106</p> <p>1 Q. And that's a document you have      2 seen before, and, in fact, it was included in      3 your reliance materials, right?      4 A. I believe so.      5 Q. And it says in the first paragraph      6 that: Livestock mandatory reporting provides      7 all market participants with the same open      8 and transparent data for slaughter cattle,      9 swine, sheep, box beef, lamb and wholesale      10 pork.      11 Do you see that?      12 A. Yes.      13 Q. And it goes on to say: LMR      14 encourages competition in the marketplace by      15 vastly improving price and supply      16 information, bringing transparency, breadth      17 and depth to market reporting. Correct?      18 A. Yes.      19 Q. And if we go to that subheader,      20 "Purchase data," it says: Purchase data      21 represents hogs that are purchased during a      22 specified time period. Data includes base      23 prices for carcass-purchased hogs and net      24 prices and hog weights for any live hogs      25 purchased, right?</p>	<p style="text-align: right;">Page 108</p> <p>1 BY MR. COLEMAN:      2 Q. I just want to know what you know      3 and don't know.      4 So I mean, do you know -- do you      5 know anything about USDA mandatory price      6 reporting, what's included in the reports      7 they publish?      8 MR. RISSMAN: Object to form.      9 A. I have some idea, yes. What I      10 understand is that, unlike Agri Stats, USDA      11 is collecting data and presenting it in an      12 aggregated form such that members of an      13 alleged conspiracy could not find out where      14 they are in relation to any particular rival.      15 BY MR. COLEMAN:      16 Q. So if we go to -- well, the --      17 actually, the last bullet point where it says      18 net price, on that page, and that's under the      19 header "Key LMR Definitions."      20 Do you see that?      21 A. Yes.      22 Q. And the net price is total amount      23 paid by the packer to a producer, right?      24 A. Yes.      25 Q. And if we turn the page, there are</p>

<p style="text-align: right;">Page 109</p> <p>1 a number of purchase types explained. So      2 there's a purchase type header.      3 Let Jacob catch up with us.      4 And purchase types include a      5 negotiated purchase, which is defined to be a      6 cash or spot market purchase by a packer of      7 livestock from a producer under which the      8 base price for livestock is determined by the      9 seller-buyer interaction and agreement on      10 delivery date.</p> <p>11 Do you see that?</p> <p>12 A. Yes.</p> <p>13 Q. And a negotiated purchase would be      14 an example of a packer paying money for a      15 market hog to an independent producer, right?</p> <p>16 MR. RISSMAN: Objection.</p> <p>17 Foundation.</p> <p>18 A. I don't see that there, but if you      19 want me to interpret that language --</p> <p>20 BY MR. COLEMAN:</p> <p>21 Q. No, that's fair. Josh's      22 foundation objection is well taken. I don't      23 want to put you past what you know and what      24 you don't know.</p> <p>25 So if you don't know what a</p>	<p style="text-align: right;">Page 111</p> <p>1 too.</p> <p>2 A. Okay. I see the different      3 purchase types. And this is -- my      4 understanding is this is what would be      5 reported to USDA.</p> <p>6 Q. And in each of those purchase      7 types listed here -- there's actually five of      8 them -- negotiated purchase, negotiated      9 formula purchase, swine or pork market      10 formula purchase, other market formula      11 purchase or other purchase agreement.</p> <p>12 In each of those, we have a packer      13 producing hogs by an independent producer,      14 right?</p> <p>15 A. I mean, you could have that. I --      16 you keep saying independent producer. I      17 don't know why this would necessarily rule      18 out a vertically integrated producer, but I      19 mean, I can accept that these definitely      20 include independents.</p> <p>21 Q. Well, we have a definition of --      22 if we scroll down, entities and sellers. And      23 there's a specific category for packer-owned      24 swine, right?</p> <p>25 MR. COLEMAN: Oh, I'm sorry.</p>
<p style="text-align: right;">Page 110</p> <p>1 negotiated purchase involves, tell me.      2 And so the question is, do you      3 understand whether negotiated purchases of      4 hogs involve a packer paying an independent      5 producer for hogs?</p> <p>6 A. I think it can include that. I      7 will leave it at that.</p> <p>8 Q. Right. So in a negotiated      9 purchase, you got a packer, you got an      10 independent producer, and you got a hog. And      11 the packer pays the hog. And this is one      12 type of the pricing mechanism for that      13 purchase, right?</p> <p>14 A. Okay.</p> <p>15 Q. Do you understand that?</p> <p>16 A. Sure.</p> <p>17 Q. And then the other purchase types      18 include a negotiated formula purchase, swine      19 or pork formula purchase or other market      20 formula purchase.</p> <p>21 Do you see that?</p> <p>22 A. Actually, I can't see that, so I      23 will go back to the -- I'm looking back at my      24 paper version.</p> <p>25 Q. It makes life easier on Jacob,</p>	<p style="text-align: right;">Page 112</p> <p>1 Stay on the same page, Jacob.      2 Packer-owned swine is right there.</p> <p>3 A. Yeah, I see it under entity      4 sellers.</p> <p>5 BY MR. COLEMAN:</p> <p>6 Q. Right.</p> <p>7 A. Yeah, I see it. I'm looking at      8 the paper version. I've got it.</p> <p>9 Q. So the USDA requires packers to      10 report whether they've -- whether the --      11 those hogs that are reported are      12 packer-owned, right?</p> <p>13 MR. RISSMAN: Objection to form      14 and foundation.</p> <p>15 A. I think -- yeah, you couldn't tell      16 that from this -- this page by itself. So I      17 don't know --</p> <p>18 (Simultaneous unreportable      19 crosstalk.)</p> <p>20 A. No, I don't know the exact, you      21 know, reporting requirements, but it would be      22 reasonable to tell the USDA whether or not      23 you owned -- were vertically integrated.</p> <p>24 Q. And, in fact, if we look at      25 Figure 1 on the next page, it provides a</p>

1 sample report, and there's a category for 2 producer-sold hogs, and it includes all the 3 hogs sold under the various pricing 4 mechanisms, right? 5 A. Yes. 6 Q. And then we have packer-sold hogs, 7 right? 8 A. Yes. 9 Q. And so for any given report, we 10 can tell which hogs were produced by 11 vertically integrated packers as packer-owned 12 or packer-sold and which were produced by 13 independent producers, right? 14 MR. RISSMAN: Objection. That 15 mischaracterizes the document pretty 16 blatantly. I think if you looked at 17 the document, you would know that's 18 not the case. 19 MR. COLEMAN: Josh, I'm not 20 going to -- you can object. 21 MR. RISSMAN: I'm going to make 22 an objection that the bullet point 23 next to packer-sold needs to be read 24 into the record so it's a complete 25 record.	Page 113  1 I -- what I -- I do not get the impression 2 from this page is that this is what's 3 necessarily available to the public. 4 Q. Do you know whether this 5 information is reported out to the public? 6 A. My understanding is that what's 7 reported out to the public is -- is 8 aggregated first so that you wouldn't be able 9 to see the kind of detail that might be on a 10 report that is filled out and submitted by a 11 particular packer. 12 Q. Do you know whether the USDA 13 produces reports that show how many hogs sold 14 in any given time period were producer-sold 15 and subject to those various purchase types 16 or pricing formulas that are listed there? 17 A. Again, my understanding is that 18 such reporting would be aggregated across 19 multiple packers, and would also come with 20 some time delay. 21 Q. Yeah. I'm not asking whether you 22 can identify particular packers or particular 23 producers. I'm simply asking whether -- you 24 know whether we can look at the producer-sold 25 category and look at any particular USDA
Page 114  1 MR. COLEMAN: Yeah. I'm just 2 trying to figure out what Dr. Singer 3 knows, and I'm getting the impression 4 that he does not understand the 5 difference -- how to ascertain from a 6 USDA report which hogs were produced 7 by independent producers and which 8 were produced by a packer, so -- 9 MR. RISSMAN: Well, I object to 10 the narrative, and I still object to 11 your questioning because I think you 12 were intentionally mischaracterizing 13 the document. 14 MR. COLEMAN: I appreciate that. 15 Go ahead, Dr. Singer. 16 MR. RISSMAN: What's the 17 question? 18 BY MR. COLEMAN: 19 Q. My question is whether you can 20 look at a USDA report and ascertain which 21 hogs were obtained by independent producers 22 by looking at the producer sold category? 23 A. My interpretation of this page 24 that you're showing me is what would have to 25 be filed and submitted to the USDA. What	Page 114  1 report to understand how many pigs were 2 produced by independent producers from that 3 report? 4 A. I think that you could look at a 5 report and get an understanding of what's 6 happening in the industry at large across all 7 packers with some time delay. But I think 8 one of the questions or maybe series of 9 questions was -- created an impression -- and 10 I just wanted to push back on it -- but that 11 this is the kind of detail that a rival could 12 observe about another rival packer's 13 purchases. I think -- 14 Q. I don't recall asking any 15 questions about that. 16 A. You actually used the word -- (Reporter clarification.) 17 A. You actually used the word, "this 18 is something we can infer from the report," 19 and it was very misleading because it seemed 20 to suggest that "we" is just a casual 21 third-party user or some rival packer can see 22 this kind of level of detail for a rival 23 packer, and I just wanted to make sure the 24 record is clear on that.

Page 117	Page 119
<p>1 Q. Okay. I appreciate that.</p> <p>2 I asked you whether you know</p> <p>3 whether any point in time throughout the</p> <p>4 alleged conspiracy period how many hogs were</p> <p>5 produced by independent producers versus</p> <p>6 vertically integrated packers.</p> <p>7 And I believe your testimony was</p> <p>8 that you didn't know, right?</p> <p>9 A. No, that was not my testimony. My</p> <p>10 testimony was sitting here, I can't give you</p> <p>11 the exact number, but I'm sure we could go</p> <p>12 look it up on a USDA report in the aggregate.</p> <p>13 Q. Right. And the way we would do</p> <p>14 that is look at this, the report, reporting</p> <p>15 out this kind of data, right?</p> <p>16 MR. RISSMAN: Object to form.</p> <p>17 And that mischaracterizes the</p> <p>18 document.</p> <p>19 A. Right. This is the -- this is the</p> <p>20 document as I understand --</p> <p>21 THE WITNESS: Sorry, Josh, are</p> <p>22 you still going?</p> <p>23 MR. RISSMAN: Well, I just think</p> <p>24 that you need to -- if you're going to</p> <p>25 ask that question, you need to read</p>	<p>1 MR. COLEMAN: You stated your</p> <p>2 objection.</p> <p>3 BY MR. COLEMAN:</p> <p>4 Q. Please answer the question,</p> <p>5 Dr. Singer.</p> <p>6 THE WITNESS: Can I have the</p> <p>7 question back, please?</p> <p>8 (The previous question was read</p> <p>9 back by the court reporter as</p> <p>10 follows:</p> <p>11 "QUESTION: And the way we would do</p> <p>12 that is look at this, the report,</p> <p>13 reporting out this kind of data,</p> <p>14 right?"</p> <p>15 MR. RISSMAN: Same objections.</p> <p>16 A. So I think that you might be able</p> <p>17 to get at the question that you're asking</p> <p>18 through some USDA report. I'm not sure if</p> <p>19 this is the report that you would use, and,</p> <p>20 again, I just want to focus on the fact that,</p> <p>21 setting aside what's in that bullet about</p> <p>22 packer-to-packer sales, that this is the kind</p> <p>23 of reporting that would come from a packer to</p> <p>24 USDA.</p> <p>25 It's not necessarily the reporting</p>
Page 118	Page 120
<p>1 into the record at what point --</p> <p>2 MR. COLEMAN: No.</p> <p>3 MR. RISSMAN: No, don't</p> <p>4 interrupt my objection.</p> <p>5 (Reporter clarification.)</p> <p>6 THE STENOGRAFHER: One at a</p> <p>7 time. I can't --</p> <p>8 MR. RISSMAN: I'm making a 601</p> <p>9 objection. I think you are really</p> <p>10 trying to blatantly mischaracterize</p> <p>11 this document. So if you want to be</p> <p>12 complete, you need to read in the fact</p> <p>13 that the packer-sold category is</p> <p>14 defined as one packer selling to</p> <p>15 another packer, which is right there</p> <p>16 next --</p> <p>17 MR. COLEMAN: You're testifying,</p> <p>18 Josh.</p> <p>19 MR. RISSMAN: Stop</p> <p>20 mischaracterizing the document.</p> <p>21 MR. COLEMAN: You're testifying.</p> <p>22 That was improper, and you know it.</p> <p>23 MR. RISSMAN: Well, I think</p> <p>24 you're trying to make this document be</p> <p>25 something it's not.</p>	<p>1 that a rival packer could observe to monitor</p> <p>2 an agreement or alleged agreement with one of</p> <p>3 its horizontal rivals.</p> <p>4 BY MR. COLEMAN:</p> <p>5 Q. Yeah. And I'm just trying to</p> <p>6 understand whether any point in time we can</p> <p>7 tell -- whether you know we can tell how many</p> <p>8 hogs are produced by independent producers</p> <p>9 versus vertically integrated packers by</p> <p>10 looking at a USDA report.</p> <p>11 Do you know whether we can</p> <p>12 ascertain that information through USDA</p> <p>13 reports?</p> <p>14 A. I think we probably could. I</p> <p>15 don't think we could do it just from this</p> <p>16 report in light of how that packer sold is</p> <p>17 defined, but I imagine that sort of</p> <p>18 information is available if you wanted to</p> <p>19 analyze it.</p> <p>20 Q. Let me call up Exhibit 65.</p> <p>21 THE VIDEOGRAPHER: Do you mean</p> <p>22 Tab 65, sir?</p> <p>23 MR. COLEMAN: Thank you. I</p> <p>24 appreciate that.</p> <p>25 And this will be Exhibit 4.</p>

Page 121	Page 123
<p>1       (Exhibit 4 was marked for 2       identification.)</p> <p>3       A. Okay. I see this.</p> <p>4 BY MR. COLEMAN:</p> <p>5       Q. Yeah. So what been marked as 6 Exhibit 4 is a -- entitled "US Hog Marketing 7 Contract Study." The authors are Glenn 8 Grimes and Ron Plain.</p> <p>9       Are you familiar with Dr. Grimes 10 or Dr. Plain?</p> <p>11      A. No.</p> <p>12      Q. And this is -- the letterhead at 13 the top refers to the University of Missouri 14 College of Agriculture, Food and Natural 15 Resources.</p> <p>16      Do you see that?</p> <p>17      A. No, I don't. I'm sorry, which -</p> <p>18      Q. At the very top.</p> <p>19      A. Oh, let's see. Oh, yes. I see 20 it. I see it, University of Missouri, yes.</p> <p>21      Q. If we turn to the second page, 22 very top, we've got date January 2009, Glenn 23 Grimes, Professor Emeritus, and Ron Plain, 24 Professor at the University of Minnesota 25 [sic], right?</p>	<p>1       in the context of Exhibit 3, right?</p> <p>2       A. Yes.</p> <p>3       Q. Sometimes called the spot market, 4 right?</p> <p>5       A. Right.</p> <p>6       Q. And there are also the swine or 7 market -- pork market formula, right?</p> <p>8       A. I see that. It's number two.</p> <p>9       Q. And number three is other market 10 formula, and number four is other purchase 11 arrangement, right?</p> <p>12      A. Right.</p> <p>13      Q. And then number five is 14 packer-sold hogs, right?</p> <p>15      A. Right. Can you let me just 16 read -- read down real quick, so I know where 17 we're going.</p> <p>18      Q. Sure.</p> <p>19      A. Okay.</p> <p>20           I got five and six now in my head.</p> <p>21      Q. Five and six would be the category 22 of hogs raised by packers that are vertically 23 integrated, right?</p> <p>24      MR. RISSMAN: Object to form.</p> <p>25      A. I think there's a certain amount</p>
Page 122	Page 124
<p>1       A. Missouri.</p> <p>2       Q. Did I say "Minnesota"?</p> <p>3       A. Yes.</p> <p>4       Q. Thanks for that.</p> <p>5           Yeah. University of Missouri.</p> <p>6       A. Okay.</p> <p>7       Q. And this is described as a 8 Department of Agricultural Economics working 9 paper, right?</p> <p>10      A. Yes.</p> <p>11      Q. If we go to the middle of the 12 page, it says: Here are the current 13 definitions of the arrangements reported 14 under the MBR system and the changes 15 affecting comparisons of data with earlier 16 studies.</p> <p>17      Do you see that?</p> <p>18      A. Yes.</p> <p>19      Q. And this lists six categories 20 of -- for the reporting of the sale of market 21 hogs, right?</p> <p>22      A. Yes. It lists six.</p> <p>23      Q. And so, for example, we got 24 negotiated, and we went -- reviewed the 25 definition of negotiated sales of market hogs</p>	<p>1       of vertical integration certainly in six and 2 most likely in five.</p> <p>3 BY MR. COLEMAN:</p> <p>4       Q. And do you know whether those 5 other four categories are hogs that are -- 6 were raised by independent producers and then 7 sold to packers?</p> <p>8       A. I think that's a pretty fair 9 inference, that they are independent given 10 that five and six -- so hopefully these 11 categories are mutually exclusive, but if 12 they are -- with that caveat, you could infer 13 that one through four is capturing or 14 launching independents.</p> <p>15      Q. And if we go to the next page on 16 Table 1, there's a table that sets out the 17 data on the percent of US hogs sold through 18 various pricing arrangements, right?</p> <p>19      A. Right.</p> <p>20      Q. And 2009, Table 1 shows that 21 5.6 percent of the hogs reported to USDA that 22 were packer-sold, right?</p> <p>23      A. Yes.</p> <p>24      Q. And 25.7 percent of the hogs that 25 year were packer-owned, right?</p>

Page 125	Page 127
<p>1 A. Yes.</p> <p>2 Q. And the remaining hogs were those</p> <p>3 other four categories of hogs that were</p> <p>4 raised by independent producers prior to sale</p> <p>5 of a packer, right?</p> <p>6 A. I think that's a reasonable</p> <p>7 inference that the other categories are</p> <p>8 capturing independents.</p> <p>9 Q. So in 2009, about 70 percent of</p> <p>10 the hogs -- market hogs sold are slaughtered</p> <p>11 and reported to USDA were raised by</p> <p>12 independent producers, right?</p> <p>13 A. I take it you're just subtracting</p> <p>14 5.6 and 25.7 from a hundred?</p> <p>15 Q. Yes.</p> <p>16 A. Okay. I can follow you. I can do</p> <p>17 the math. I can get you to that 70, yes.</p> <p>18 Q. And so by looking at that USDA</p> <p>19 market mandatory reporting data,</p> <p>20 Professor Plain and Professor Grimes were</p> <p>21 able to set up the numbers showing us that</p> <p>22 70 percent of the hogs slaughtered and</p> <p>23 reported to USDA in 2009 were produced by</p> <p>24 independent producers, right?</p> <p>25 A. That is --</p>	<p>1 basis sitting here to dispute it.</p> <p>2 Q. And I think we previously</p> <p>3 ascertained that you don't know what -- for</p> <p>4 any given defendant, you don't know what</p> <p>5 percentage of their hogs they purchased from</p> <p>6 an independent producer as opposed to produce</p> <p>7 themselves; is that right?</p> <p>8 A. I think, sitting here, I don't</p> <p>9 know that. I surmise that I can probably</p> <p>10 find that out for you, but sitting here, I</p> <p>11 don't know it.</p> <p>12 Q. Do you recognize that there are</p> <p>13 some defendants that are more vertically</p> <p>14 integrated than others?</p> <p>15 A. Sure.</p> <p>16 Q. For example, do you have any idea</p> <p>17 for Smithfield, what percentage of the hogs</p> <p>18 that it slaughters were raised by its own</p> <p>19 farms -- vertically integrated farms as</p> <p>20 opposed to bought from an independent</p> <p>21 producer?</p> <p>22 MR. RISSMAN: Objection. Asked</p> <p>23 and answered.</p> <p>24 A. I don't have a different answer</p> <p>25 for you. Still sitting here, I don't know</p>
Page 126	Page 128
<p>1 MR. RISSMAN: Objection.</p> <p>2 Foundation.</p> <p>3 A. It's a reasonable inference. I</p> <p>4 don't want to fully embrace it because, you</p> <p>5 know, I'm seeing it for the first time</p> <p>6 sitting here. But if you asked me to go out</p> <p>7 and estimate that number by year, it seems</p> <p>8 like this study could help inform that</p> <p>9 answer.</p> <p>10 BY MR. COLEMAN:</p> <p>11 Q. On the next page -- the top of the</p> <p>12 page, the first sentence says that: By</p> <p>13 adding the percentage of hogs purchased in</p> <p>14 the negotiated markets to the percentage of</p> <p>15 purchased on a swine-pork market formula, the</p> <p>16 current study indicates that the price of at</p> <p>17 least 49 percent of the hogs in the US was</p> <p>18 directly determined by the negotiated market.</p> <p>19 Do you see that?</p> <p>20 A. Yes.</p> <p>21 Q. And do you have any basis to</p> <p>22 disagree with that?</p> <p>23 A. It's definitional so if that's how</p> <p>24 you want to define the negotiated market, it</p> <p>25 just naturally follows. So I don't have a</p>	<p>1 what it is, and I don't think I reported that</p> <p>2 either in my report.</p> <p>3 BY MR. COLEMAN:</p> <p>4 Q. Is it your opinion that defendants</p> <p>5 shared the same interest with respect to the</p> <p>6 price they paid for hogs regardless of how</p> <p>7 many hogs they produce themselves?</p> <p>8 MR. RISSMAN: I will instruct</p> <p>9 the witness to only answer if he has</p> <p>10 an opinion on that topic.</p> <p>11 A. I don't have an opinion, so I</p> <p>12 guess I won't answer it.</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. Well, one of the levers to</p> <p>15 implement the conspiracy, as I understand it,</p> <p>16 was to reduce the sow herd, restrict the</p> <p>17 number of hogs on farms. I mean, that's your</p> <p>18 opinion, that that is part of challenged</p> <p>19 conduct or the way that defendants</p> <p>20 implemented the underlying conspiracy, right?</p> <p>21 A. I think that liquidation is one of</p> <p>22 several ways in which they reduced output,</p> <p>23 yes -- alleged to -- yeah, reduced output.</p> <p>24 That's right.</p> <p>25 Q. Do you have an opinion as to</p>

Page 129	Page 131
<p>1 whether the reduction in the sow herd or any  2 kind of consequent reduction in the number of  3 hogs produced was in the interest of all  4 defendants?</p> <p>5 MR. RISSMAN: Same limiting  6 instruction.</p> <p>7 A. I think that my model shows that  8 the challenged conduct can be associated with  9 artificially inflated prices at the packer or  10 processing level, and the extent that all  11 defendants are processors, then they would  12 have a shared and common interest in engaging  13 in conduct that artificially inflated those  14 prices that would artificially inflate their  15 profits.</p> <p>16 BY MR. COLEMAN:</p> <p>17 Q. And so you have the opinion that  18 it was in Hormel's interest, for example, to  19 raise the price of the hogs that it  20 purchased?</p> <p>21 MR. RISSMAN: Objection. Form.  22 Mischaracterizes testimony. And same  23 limiting instruction on whether you  24 have an opinion on that.</p> <p>25 A. Yeah. I don't have opinions on --</p>	<p>1 herd and consequently reduce the supply of  2 market hogs available right?  3 A. That's one of the three levers.  4 That one occurs, I will grant you, in the  5 upstream market, but the other two are  6 occurring in relevant markets.</p> <p>7 Q. And did you evaluate the extent to  8 which the reduction in sow herd raised the  9 price of market hogs?</p> <p>10 A. Again, are you asking me about the  11 upstream prices? I don't have a model that  12 explains how the challenged conduct affected  13 upstream prices. I'm aiming my analysis and  14 attention on price effects in the relevant  15 market.</p> <p>16 Q. Yeah, I appreciate that  17 clarification.</p> <p>18 Just so we are clear, by "upstream  19 market," do you mean the price that packers  20 pay for the hogs that they're purchasing from  21 independent producers?</p> <p>22 A. Not the price, but hog production.  23 The price would be part of it, but yes.  24 It's -- the upstream market is the hog  25 production market, yes.</p>
Page 130	Page 132
<p>1 and that's not even characterizing the  2 effects of the alleged conspiracy. The  3 effects of the alleged conspiracy is to  4 inflate prices in the relevant market, and  5 you're asking me whether price effects in the  6 upstream market was consistent with the  7 interest of Hormel.</p> <p>8 I don't have opinions about the  9 price effects in the upstream. I don't think  10 the alleged conspiracy was aimed at  11 effectuating price effects in the upstream  12 market.</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. Yeah. Because that wouldn't make  15 sense, right, for pork packers to conspire to  16 raise the price that they pay for market  17 hogs?</p> <p>18 MR. RISSMAN: Object to form.  19 A. I think that if there were  20 conspiracy, that the objective would be to  21 artificially inflate the prices of processed  22 pigs that they sold.</p> <p>23 BY MR. COLEMAN:</p> <p>24 Q. One of the levers to do that would  25 be to -- in your mind, was to reduce the sow</p>	<p>1 Q. Do you have any opinion as to  2 whether the defendant pork packers compete to  3 purchase hogs?  4 A. Not really. I have no opinions  5 for the purpose of this case. I don't. I  6 haven't studied the nature of the rivalry in  7 the upstream market.</p> <p>8 Q. How many hog farms are there in  9 the United States?  10 A. I don't know.  11 Q. And do you -- in your mind, do you  12 have any opinion as to whether hog production  13 is relatively concentrated or unconcentrated?  14 A. My understanding is that it, at  15 least compared to the packer market, the  16 relevant market here is less concentrated.  17 But I can't -- sitting here, I haven't  18 studied the level of concentration in the  19 upstream market.</p> <p>20 Q. The USDA maintains data and  21 information about the number and size of hog  22 producers, right?  23 MR. RISSMAN: Objection.  24 Foundation.  25 A. It's possible they do.</p>

<p style="text-align: right;">Page 133</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. You just don't know one way or the 3 other?</p> <p>4 A. It's not something I studied. I 5 studied phenomenon in the relevant market, 6 not in the upstream market.</p> <p>7 Q. Is it -- do you think the hog 8 market and production by independent 9 producers is completely irrelevant to your 10 analysis?</p> <p>11 A. I think that to the extent there 12 was a conspiracy to raise prices and suppress 13 output in the processing market, that that 14 could have anticompetitive effects regardless 15 of what is going on upstream.</p> <p>16 So "irrelevant" is kind of a harsh 17 term, but I'm having a hard time 18 contemplating a fact pattern, whether it's 19 perfectly competitively supplied upstream, 20 perfectly monopolized upstream. That would 21 somehow upset or negate a conspiracy to raise 22 prices in the relevant market.</p> <p>23 I'm having a hard time figuring 24 out how you get out of that one by pointing 25 to what's happening upstream.</p>	<p style="text-align: right;">Page 135</p> <p>1 by the market. Now, to the extent that the 2 packers have buying power, they could 3 suppress the price below competitive levels, 4 and that's consistent with, I think, Figure 4 5 in my report in the background section.</p> <p>6 Q. And that would be the packers' 7 interest, if anything, right?</p> <p>8 If there was a conspiracy and 9 cartel behavior with respect to buying hogs, 10 it would be to lower the price they were 11 paying for hogs, right?</p> <p>12 MR. RISSMAN: Object to form.</p> <p>13 A. No, I don't like -- I don't like 14 how you put it because you act as if that's 15 the only thing that could raise their 16 profits. It's true that if they could 17 conspire to reduce the price of an input, 18 that would increase their profits.</p> <p>19 But it's also true that if they 20 could conspire to raise the price of what 21 they're selling in the relevant market, the 22 processing market, that would also increase 23 their profits. They aren't mutually 24 exclusive.</p> <p>25</p>
<p style="text-align: right;">Page 134</p> <p>1 Q. Well, you're not aware of any 2 instance in which -- in the relevant time 3 period in which packers declined to purchase 4 and harvest the hogs produced by independent 5 farmers, right?</p> <p>6 MR. RISSMAN: Objection. Form. 7 Calls for speculation.</p> <p>8 A. I don't think that was one of the 9 levers that I reviewed. I reviewed 10 liquidation, which is happening upstream, and 11 harvest reduction and exports. Those are the 12 levers that I reviewed.</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. And independent producers make the 15 decision about how many sows they want to 16 maintain, right?</p> <p>17 MR. RISSMAN: Objection. 18 Foundation.</p> <p>19 A. I think that a firm that lacks 20 market power is going -- can produce as much 21 it wants at the prevailing market price.</p> <p>22 Q. But prevailing market price for an 23 independent producer is the price that the 24 packers paid for the hog, right?</p> <p>25 A. Well, it's the price that is set</p>	<p style="text-align: right;">Page 136</p> <p>1 BY MR. COLEMAN: 2 Q. My point was if there was -- if a 3 conspiracy extended to the purchase of market 4 hogs, and the cartel that you assumed to have 5 existed existed, the interest of the cartel 6 would have been in lowering the price that 7 they paid for -- for hogs, right?</p> <p>8 MR. RISSMAN: Object to form. 9 A. Yeah. I don't think that's what 10 the conspiracy -- the alleged conspiracy is 11 about, as I understand the complaint and 12 challenged conduct. I don't think there's an 13 attempt to suppress prices by virtue -- in 14 the upstream market by virtue of 15 coordination.</p> <p>16 I just don't recall that being an 17 element of the case.</p> <p>18 BY MR. COLEMAN: 19 Q. There's no allegation of that kind 20 of collusion, right?</p> <p>21 A. I don't recall one. I would have 22 to -- you know, to feel comfortable and 23 confident, I would have to go back through 24 the complaint, but my understanding is that 25 the allegations are aimed at competitive</p>

Page 137	Page 139
<p>1 facts or anticompetitive facts in the      2 processing market and what's sold by the      3 defendants.</p> <p>4 Q. And you would agree that a      5 decision by an individual farm to      6 underproduce in a competitive market is met      7 by rivals filling the production gap, right?</p> <p>8 MR. RISSMAN: Objection. Vague      9 and incomplete hypothetical.</p> <p>10 A. Just to make sure I have it, this      11 is a -- an independent firm or just a firm in      12 a competitive market, you want me to assume?</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. Yes.</p> <p>15 A. Yeah. And their decision not to      16 produce is going to redound to the benefit of      17 other rivals; that's what you're asking?</p> <p>18 Q. My question was whether -- if      19 it -- in a competitive market, if one      20 individual firm reduces its production or      21 underproduces -- that loss of production will      22 be met by rivals filling in the production      23 gap, right?</p> <p>24 MR. RISSMAN: Object to form.</p> <p>25 A. I think that's fair. By</p>	<p>1 the independents. I will just leave it at      2 that.</p> <p>3 BY MR. COLEMAN:</p> <p>4 Q. You haven't studied that?</p> <p>5 A. I have not. I have not.</p> <p>6 Q. I'm going to pull up Tab 66.</p> <p>7 MR. COLEMAN: Jacob, are we on      8 Exhibit 5?</p> <p>9 MR. RISSMAN: This one has been      10 marked previously. Do you want to      11 keep the same marking or --</p> <p>12 MR. COLEMAN: Oh, yeah. Thanks      13 for that.      (Exhibit 5 was marked for      identification.)</p> <p>14 BY MR. COLEMAN:</p> <p>15 Q. Yeah. This has been previously      16 marked as Meyer Exhibit 2.</p> <p>17 And, Dr. Singer, let me know when      18 you're -- when you're with us and ready to --</p> <p>19 A. I'm with you. I've not read the      20 study, but, yeah, I've seen it. Now I've      21 looked at it, at least the title.</p> <p>22 Q. And you're familiar with      23 Dr. Meyer, right, Dr. Steve Meyer, who</p>
Page 138	Page 140
<p>1 definition, if we are ask -- we are talking      2 about an atomistic firm that lacks market      3 power, then its decision to withhold      4 production by itself is not going to affect      5 market prices.</p> <p>6 BY MR. COLEMAN:</p> <p>7 Q. So what prevented the independent      8 producers from expanding their sow herds or      9 adding production, increase the farrowings      10 and buying more weaner pigs from Canada, any      11 of those things in response to Smithfield or      12 Tyson reducing their sow herd?</p> <p>13 MR. RISSMAN: Object to form.</p> <p>14 And if you studied that and have an      15 opinion to offer, you can do that.</p> <p>16 A. I haven't studied the reaction of      17 independents to the liquidation that occurred      18 here. But I will note that based on the      19 figure that you just gave me, about      20 30 percent being controlled by the packers      21 themselves, that seems to be a substantial      22 and economically significant share such that      23 if there were attempts by the packers to      24 liquidate and to reduce supply that could      25 have an effect that wouldn't be easily met by</p>	<p>1 authored this article?</p> <p>2 A. I don't know if I'm familiar.</p> <p>3 It's possible that I've cited something else      4 he's done, but I -- just sitting here, the      5 name is not familiar.</p> <p>6 Q. You cited him multiple times in      7 your report, right?</p> <p>8 A. I would have to go back. I don't      9 remember the author of every study. You      10 know, the report has hundreds of citations,      11 so it's possible that I cited him multiple      12 times.</p> <p>13 Q. You recognize that Dr. Meyer is an      14 agricultural economist with particular focus      15 on the hog industry, right?</p> <p>16 MR. RISSMAN: Object to form.</p> <p>17 Foundation.</p> <p>18 BY MR. COLEMAN:</p> <p>19 Q. If you -- I am sorry. If you      20 don't know, you don't know.</p> <p>21 A. I mean, based on -- all I can do      22 is -- based on the study that you're showing      23 me, that looks like it's certainly an      24 interest of his.</p> <p>25 Q. If you turn to page -- the second</p>

1 page of the document, scroll down to: The 2 importance of packing capacity. 3 And the second paragraph there 4 says: Furthermore, no one in the packing 5 industry sector decides how much to produce. 6 That decision rests solely with the people 7 who breed and farrow sows. 8 Do you see that? 9 A. Yes. 10 Q. Do you have a basis to disagree 11 with Dr. Meyer's assessment on that point? 12 MR. RISSMAN: Object to form and 13 foundation. 14 A. Yes, I do have a basis. If what 15 he's saying is producing in a relevant 16 market, then I've seen record evidence that 17 is inconsistent with that claim. 18 If he's using the word "produce" 19 to explain what's happening upstream in the 20 pig production market, then I would agree 21 with it. It's not clear and I can't -- I 22 can't -- I would have to read the surrounding 23 paragraphs to understand what he means by how 24 much to produce. 25	Page 141  1 that would allow a large packer to influence 2 the output in the upstream market. One is to 3 the extent they're vertically integrated, 4 that's their decision about how much to 5 produce. 6 But, two, to the extent they have 7 monopsony power -- and a lot of these 8 defendants are very large buyers in the 9 upstream market -- they could -- they could 10 suppress output by pushing the upstream 11 prices below the marginal revenue product 12 below the competitive levels. 13 Q. Yeah. We have established that 14 there's no allegation or evidence that you've 15 reviewed of an exercise of monopsony power by 16 the defendants, right? 17 A. No, that's not true. Well, I just 18 -- for the record, I've got a figure showing 19 that there does appear to have been a squeeze 20 on the independent farmers over the course of 21 the class period. 22 And, second, I'm aware of many 23 studies, including one that was issued by the 24 White House recently, suggesting that, in 25 fact, the packers are exercising buying power
Page 142  1 BY MR. COLEMAN: 2 Q. Yeah, I appreciate that 3 clarification. 4 So you would agree with respect to 5 the supply of hogs available, decisions about 6 how many hogs to produce rests with the 7 people who breed and farrow sows, right? 8 A. Yes, with the caveat, that some of 9 those people are packers themselves. So I 10 think you need to carve out those, and just 11 as you did with your prior questions, you had 12 asked me, you know, if the packers have 13 control over what the independents are 14 producing, and I would say yes, to the extent 15 that they can effectuate a price reduction 16 from those independents, they could -- they 17 could -- they could, in fact, influence how 18 much is being produced in the upstream 19 market. 20 Q. And specifically what packers had 21 the ability to materially control 22 the volume of hogs being produced in the 23 upstream market as you described it? 24 A. So -- so I think we have 25 identified through this Q&A two mechanisms	Page 142  1 in squeezing independent farmers in the 2 upstream market. 3 Q. Is that an allegation anywhere in 4 the complaint? 5 A. I don't think that it relates to 6 the complaint. You're asking me if I'm aware 7 of it, and I'm aware of such studies. 8 Q. Did you form any opinions about 9 that? 10 A. Not for the purpose of this 11 report. Not for the purpose of this report. 12 But I'm aware of authoritative sources saying 13 that that has, in fact, happened. 14 Q. Did you provide those as materials 15 relied upon? 16 A. Yes. I think that around 17 Figure 4, I cite a study that was recently 18 released by, I believe the White House. We 19 can go look around Figure 4 and Figure 5. 20 I don't know if I'm going to be 21 able to call up the site, but I do remember 22 that in my report about -- about agencies or 23 the White House recently investigating this 24 issue. 25 Q. And --

<p style="text-align: right;">Page 145</p> <p>1       (Simultaneous unreportable 2       crosstalk.)</p> <p>3       A. I found it. I didn't mean -- but 4       it is in Footnote 18. That's the Brian Deese 5       study that came out of the White House.</p> <p>6       BY MR. COLEMAN:</p> <p>7       Q. What page of your report are you 8       looking at?</p> <p>9       A. Page 10, Footnote 18.</p> <p>10      Q. And -- yeah. So tell us about 11     this White House investigation on which 12     you're relying. What years was that -- were 13     they investigating?</p> <p>14      A. Well, they were investigating the 15     past -- I mean, it just came out in September 16     of 2021. So they would be studying a period 17     that coincides with the class period and the 18     conduct period here.</p> <p>19      Q. Sure about that?</p> <p>20      A. Yes.</p> <p>21      Q. And did you attempt to -- did you 22     view that as challenged conduct --</p> <p>23      A. No. I mean --</p> <p>24      Q. -- an exercise of monopsony power 25     to squeeze independent pork producers?</p>	<p style="text-align: right;">Page 147</p> <p>1       A. Well, they decide how much in 2       response to various market phenomenon, 3       including market prices, and if prices are 4       being artificially suppressed by packers with 5       buying power that could affect their decision 6       of how much to supply.</p> <p>7       BY MR. COLEMAN:</p> <p>8       Q. My question was whether they make 9       that decision as to how many barns to 10      maintain or infrastructure for raising hogs.</p> <p>11      That's the farmer's decision, 12      right?</p> <p>13      A. Ultimately --</p> <p>14      MR. RISSMAN: Objection.</p> <p>15      A. Ultimately, they make the decision 16     in response to prevailing market conditions, 17     and to the extent that packers with buying 18     power can suppress prices below competitive 19     levels of the upstream market, that could 20     affect the decision by independent farmers as 21     to how much to produce.</p> <p>22      BY MR. COLEMAN:</p> <p>23      Q. But they make the decision, right?</p> <p>24      MR. RISSMAN: Same objection.</p> <p>25      A. I mean, again, with the caveat</p>
<p style="text-align: right;">Page 146</p> <p>1       A. I don't think that that's part of 2       the challenged conduct, but you're asking me 3       if I thought the packers could wield any 4       influence as to production or output 5       decisions upstream, and the answer is yes. 6       And I've given you two mechanisms 7       by which they could do that.</p> <p>8       Q. But you have not formed any 9       opinions as to whether they actually used 10      monopsony power in this period, right?</p> <p>11      A. I don't think that I formed 12      economic opinions. I just relayed the 13      research from the White House. And I -- and 14      in Figure 5, as you know, I show that the 15      spread that was being enjoyed by the packers 16      was growing over time, and if you compare it 17      to Figure 4, you can see part of that 18      enhanced spread came off the backs of the 19      farmers.</p> <p>20      Q. Do you -- independent producers 21      decide how many barns and how much 22      infrastructure for raising hogs they want to 23      have on their farms, right?</p> <p>24      MR. RISSMAN: Objection. Form. 25      Foundation.</p>	<p style="text-align: right;">Page 148</p> <p>1       that they're not making it in a vacuum. They 2       are making it in response to market forces, 3       some of which are influenced directly by 4       defendants.</p> <p>5       BY MR. COLEMAN:</p> <p>6       Q. And, again, you did not form any 7       opinion as to whether the packers were 8       conspiring or deliberately collectively 9       suppressing the market price of hogs, right?</p> <p>10      MR. RISSMAN: Objection. Asked 11      and answered.</p> <p>12      A. I don't think that's part of my 13      opinion, and I don't think that's part of the 14      allegation here.</p> <p>15      BY MR. COLEMAN:</p> <p>16      Q. Which packers are engaged in a 17      material amount of hog production?</p> <p>18      MR. RISSMAN: Object to form. 19      Vague.</p> <p>20      A. I think that I have a table that 21      shows which ones are vertically integrated. 22      I don't know if I will be able to take it to 23      you in realtime, but I seem to recall listing 24      that -- oh, on Page 20, I describe which ones 25      are vertically integrated.</p>

<p>1        But I seem to recall a table to 2 the same effect. And I don't think that I 3 distinguished between materially. I don't 4 even know if that means materially integrated 5 versus nonmaterially. I just did integrated. 6 BY MR. COLEMAN: 7        Q. Can you give me name? I think we 8 said Smithfield and Tyson had a sow, or 9 anybody else -- do you know whether any other 10 defendant is vertically integrated? 11      A. Well, let's go through Page 20 12 where I bullet out each of the defendants. 13      Q. Is that the extent of the 14 information you have about the vertically 15 integration of the defendants? 16      MR. RISSMAN: Object to form. 17      A. I don't -- I don't think it's the 18 extent because I seem to remember a table -- 19 and I could be misremembering -- that tells 20 us which ones are vertically integrated. But 21 I know that in this summary on Page 20, I say 22 that -- yeah. I don't think that this is -- 23 this is the place. I am reading 20 now. 24 BY MR. COLEMAN: 25      Q. Yeah. That's fine. So one -- one</p>	<p>1 increments, so what's the time -- how 2 long have we been going in this 3 session? 4            MR. RISSMAN: Little less than 5 an hour 20. 6            THE WITNESS: Why don't we take 7 it to an hour and 30. Is that all 8 right? And we could just kind of 9 stick to the hour 30 on each session. 10          Is that all right? 11          MR. RISSMAN: It's fine with me. 12          Is that okay with you, Craig? 13          MR. COLEMAN: I'm fine with 14 that, and feel free to interrupt me 15 when you're ready. 16          THE WITNESS: I'm not keeping 17 time. But if someone were to tell me 18 we are at the 1:30 point on this tape, 19 that would be nice. 20          MR. RISSMAN: That's fine. 21 BY MR. COLEMAN: 22          Q. Let's have you turn to Tab 26. 23          MR. COLEMAN: And, Jacob, you 24 could pull that up on the screen. 25          And I've got to engage in the</p>
<p>1 source of information if we wanted to know 2 the extent to which each defendant is 3 vertically integrated would be to look at 4 their hog acquisition data, right, to tell 5 how many hogs they acquired and from what 6 source? 7        A. Yeah, I think Agri Stats would 8 provide that in at least one of its reports. 9        Q. And do you know whether defendants 10 produced hog acquisition data in this case 11 themselves? 12      A. Well, I think that we have access 13 to all of the -- all of the Agri Stats 14 reports. And I think there are some reports 15 that are aimed at the upstream market, and 16 that's where I would go to try to get that 17 sort of information. 18      MR. RISSMAN: We have been going 19 another hour 20. Hal is on the 20 East Coast. 21      So I don't know how you feel 22 about lunch, Dr. Singer. If you want 23 to keep going or what you want to do. 24      THE WITNESS: Well, I think that 25 we should be moving in hour-and-a-half</p>	<p>Page 150</p> <p>1 same binder-flipping exercise that you 2 do. 3            MR. RISSMAN: This is 5? 4            MR. COLEMAN: I want to say 6. 5            Jacob, can you help us out? 6            THE VIDEOGRAPHER: It should be 7 6, sir. 8            (Exhibit 6 was marked for 9 identification.) 10 BY MR. COLEMAN: 11      Q. Dr. Singer, are you with us? 12      A. Yeah. 13      Q. So what's been marked as Exhibit 6 14 is a document created by the Pork Checkoff 15 with the title: Quick Facts. The Pork 16 Industry at a Glance. 17      Are you with me? 18      A. Yes. 19      Q. And are you familiar with Pork 20 Checkoff? 21      A. It's not ringing a bell, but I -- 22 leave it at that. 23      Q. This was a document on which you 24 relied in your report, right? 25      A. You have to take me to -- I've got</p> <p>Page 152</p>

Page 153	Page 155
<p>1 hundreds of documents.</p> <p>2 Q. Footnote 24.</p> <p>3 A. What page, sorry?</p> <p>4 Q. Footnote 24.</p> <p>5 A. Let me go look.</p> <p>6 Yes, I cite it -- I cite it for</p> <p>7 that proposition that: For decades, pigs</p> <p>8 have been genetically bred to be leaner yet</p> <p>9 heavier than their wild predecessors.</p> <p>10 Q. Did you read the report?</p> <p>11 A. I think that for something like</p> <p>12 this on the background section, that a</p> <p>13 staffer would have read it and showed it to</p> <p>14 me, and we would have decided whether or not</p> <p>15 it was worthy of inclusion in the background</p> <p>16 section.</p> <p>17 Q. Page 45 of the document --</p> <p>18 MR. COLEMAN: Jacob, for your</p> <p>19 benefit, I think it's 50 out of 134 of</p> <p>20 the PDF.</p> <p>21 MR. RISSMAN: I'm sorry. What</p> <p>22 page are you on, Craig?</p> <p>23 MR. COLEMAN: I'm on Page 45,</p> <p>24 referring to the numbered page of the</p> <p>25 document.</p>	<p>1 Q. Right. And if that doesn't</p> <p>2 happen, that's a major problem for producers,</p> <p>3 right?</p> <p>4 MR. RISSMAN: Object to form.</p> <p>5 A. If -- if -- I mean, I'm going to</p> <p>6 accept your hypothetical. I don't know how</p> <p>7 it could happen, but it costs went up in a</p> <p>8 competitively provided industry but prices</p> <p>9 didn't go up -- I mean, it's counterfactual,</p> <p>10 but I am just setting aside all the problems</p> <p>11 with it.</p> <p>12 If you're just asking me to assume</p> <p>13 a vacuum, then, yes, I mean, that would be</p> <p>14 bad for -- for producers.</p> <p>15 BY MR. COLEMAN:</p> <p>16 Q. In any case, the Pork Checkoff</p> <p>17 board tells us that in 2008 was a period that</p> <p>18 caused many producers extreme financial</p> <p>19 distress, right?</p> <p>20 MR. RISSMAN: Objection.</p> <p>21 Foundation.</p> <p>22 A. That's what it says, yes.</p> <p>23 BY MR. COLEMAN:</p> <p>24 Q. And do you dispute that 2008 was a</p> <p>25 period of extreme financial hardship for many</p>
Page 154	Page 156
<p>1 There we go. Guy Fieri is a</p> <p>2 helpful reference point.</p> <p>3 BY MR. COLEMAN:</p> <p>4 Q. So in 2008, the Pork Checkoff</p> <p>5 tells us that: Historically unprecedented</p> <p>6 high feed costs led to one of the most</p> <p>7 challenging times in the history for pork</p> <p>8 producers. The blow, softened only by</p> <p>9 record-high market hog prices, caused many</p> <p>10 producers extreme financial distress.</p> <p>11 Do you see that?</p> <p>12 A. Yes. And it makes me excited that</p> <p>13 I controlled for the cost of rearing a pig in</p> <p>14 my regression.</p> <p>15 Q. Yeah. Notwithstanding higher</p> <p>16 prices that year, it was a period of extreme</p> <p>17 financial distress for producers, right?</p> <p>18 A. It actually says the opposite. It</p> <p>19 says that prices went up to accommodate those</p> <p>20 higher costs, which is what I'm hoping my</p> <p>21 cost variable, at least in part, has</p> <p>22 captured.</p> <p>23 So this episode shows that when</p> <p>24 costs go up, prices go up in the upstream</p> <p>25 market.</p>	<p>1 pork producers?</p> <p>2 A. I don't have a reason to dispute</p> <p>3 it.</p> <p>4 Q. And if we go to the next page,</p> <p>5 Page 46, there's a reference to: Beginning</p> <p>6 in April of 2009: News coverage of H1N1 or</p> <p>7 swine flu, as it was erroneously referred to</p> <p>8 by the media, added to an already challenging</p> <p>9 economic time for producers. It was</p> <p>10 estimated that producers lost more than</p> <p>11 \$2 billion after the outbreak of H1N1.</p> <p>12 Do you see that?</p> <p>13 A. Yes. And it also makes me excited</p> <p>14 that I controlled for H1N1 with a new dummy</p> <p>15 variable.</p> <p>16 Q. Yeah. And your testimony was that</p> <p>17 it was a counterfactual scenario where</p> <p>18 producers would be faced with increasing</p> <p>19 costs but lowering prices. But the reality</p> <p>20 is that's exactly what happened, isn't it?</p> <p>21 A. I don't see how you get that from</p> <p>22 that bullet in 2009. All it says is that --</p> <p>23 is that they lost more than 2 billion after</p> <p>24 the outbreak of H1N1.</p> <p>25 You're asking if that was an</p>

Page 157	Page 159
<p>1 episode in which prices went below cost?</p> <p>2 Q. Do you know whether the swine flu</p> <p>3 lowered demand for US pork and ultimately</p> <p>4 domestic hogs?</p> <p>5 A. Yes, I do know.</p> <p>6 Q. And do you know whether that</p> <p>7 reduction in demand for US pork and US hogs</p> <p>8 resulted in prices for market hogs declining?</p> <p>9 A. That I haven't studied. I haven't</p> <p>10 studied that, but it's a reasonable</p> <p>11 inference.</p> <p>12 Q. And do you have any basis to</p> <p>13 dispute that producers lost more than</p> <p>14 \$2 billion in this time period?</p> <p>15 A. No, but it -- again, it's</p> <p>16 something that I controlled for explicitly in</p> <p>17 my model with an H1N1 dummy variable.</p> <p>18 Q. In an environment in which hog</p> <p>19 producers are collectively losing \$2 billion,</p> <p>20 you as an economist would expect production</p> <p>21 to decrease, right?</p> <p>22 MR. RISSMAN: Object to form.</p> <p>23 Incomplete hypothetical.</p> <p>24 A. I don't know if they would be able</p> <p>25 to turn down the production that quickly, but</p>	<p>1 would move together.</p> <p>2 And I think that in 2009, it</p> <p>3 appears in this bullet that costs and prices</p> <p>4 may have diverged. In which case, I'm glad</p> <p>5 that I controlled for some special</p> <p>6 circumstance in 2009 with the H1N1 variable.</p> <p>7 Q. And you -- I think I took from</p> <p>8 your previous answer that you don't dispute</p> <p>9 that you would expect hog production to</p> <p>10 decrease in an environment in which hog</p> <p>11 producers were collectively losing</p> <p>12 \$2 billion; is that right?</p> <p>13 MR. RISSMAN: Object to form and</p> <p>14 incomplete hypothetical.</p> <p>15 A. I think that if there were a</p> <p>16 permanent reduction in profitability</p> <p>17 upstream, that could be associated with a</p> <p>18 decline in upstream production. I will grant</p> <p>19 you that.</p> <p>20 If the H1N1 catastrophe was</p> <p>21 short-lived, then it's possible that</p> <p>22 production wasn't able to react in sufficient</p> <p>23 time.</p> <p>24 BY MR. COLEMAN:</p> <p>25 Q. If we flip to Page 81 of the</p>
Page 158	Page 160
<p>1 it's a reasonable inference that production</p> <p>2 could have decreased upstream.</p> <p>3 Q. There could be some --</p> <p>4 (Reporter clarification.)</p> <p>5 MR. RISSMAN: Sorry. Did the</p> <p>6 witness finish his answer?</p> <p>7 THE WITNESS: No, I can wait.</p> <p>8 It's fine.</p> <p>9 BY MR. COLEMAN:</p> <p>10 Q. I didn't mean to interrupt. I</p> <p>11 thought you were done.</p> <p>12 So if you have something to add,</p> <p>13 go ahead.</p> <p>14 A. No. Just that this is why it was</p> <p>15 important to include a new dummy variable for</p> <p>16 the existence of the H1N1 virus.</p> <p>17 Q. What you didn't control for was</p> <p>18 the profitability of -- for producers of</p> <p>19 raising hogs, right?</p> <p>20 A. I would say that I didn't control</p> <p>21 for that explicitly, but I do have the cost</p> <p>22 of the producers as a control variable, and I</p> <p>23 think in normal circumstances, outside of an</p> <p>24 H1N1 virus that scared people off of pork</p> <p>25 temporarily, I think that costs and prices</p>	<p>1 document; go to the top of page. We have a</p> <p>2 nice picture of Dr. Meyer.</p> <p>3 It says: For America's pork</p> <p>4 producers, 2008 and 2009 were among the most</p> <p>5 difficult years ever. In fact, the combined</p> <p>6 losses incurred by producers in 2008 and 2009</p> <p>7 exceeded the previously worst two-year period</p> <p>8 on record, 1998 and 1999.</p> <p>9 By the end of 2009, US pork</p> <p>10 producers have lost money in 24 of the last</p> <p>11 26 months amounting to nearly \$6 billion.</p> <p>12 Do you see that?</p> <p>13 A. Yes.</p> <p>14 Q. And you don't dispute the facts</p> <p>15 that American pork producers lost \$6 billion</p> <p>16 over that two-year time frame, right?</p> <p>17 A. I don't have anything to dispute</p> <p>18 it with here, but if you want, I can just</p> <p>19 accept that as being the best estimate.</p> <p>20 Q. And, again, my question is, in</p> <p>21 that kind of environment where pork producers</p> <p>22 have lost money to the tune of \$6 billion</p> <p>23 collectively, it wouldn't be unreasonable to</p> <p>24 see reductions in sow herd, reductions on</p> <p>25 number of hogs on farms and a reduction in</p>

<p>1 the supply of hogs generally?</p> <p>2 MR. RISSMAN: Object to form and</p> <p>3 incomplete hypothetical.</p> <p>4 A. It's certainly possible that that</p> <p>5 happened, but that's precisely what would be</p> <p>6 controlled for by my dummy variable for H1N1.</p> <p>7 That's to say if there was a unique set of</p> <p>8 circumstances that upset the relevant market,</p> <p>9 the pork processing market, you would want to</p> <p>10 control for that, and I did.</p> <p>11 BY MR. COLEMAN:</p> <p>12 Q. And, again, this brings us to the</p> <p>13 but-for world. So absent the challenged</p> <p>14 conduct, the existence of an alleged</p> <p>15 conspiracy, how much would the sow herd have</p> <p>16 been reduced in this environment where US</p> <p>17 pork producers lost \$6 billion over a</p> <p>18 two-year period?</p> <p>19 MR. RISSMAN: Objection. Asked</p> <p>20 and answered.</p> <p>21 A. To the extent that H1N1 virus</p> <p>22 upset supply, then an economist would want to</p> <p>23 control for that in a regression model, and</p> <p>24 that's precisely what I've done; that is, you</p> <p>25 cannot allege that my model is misattributing</p>	<p>Page 161</p> <p>1 instruction.</p> <p>2 A. I perform an output effect that</p> <p>3 turns from a challenged conduct -- on the</p> <p>4 challenged conduct, and I have not decomposed</p> <p>5 it across the various ways in which output</p> <p>6 was suppressed.</p> <p>7 MR. COLEMAN: I think we have</p> <p>8 gone 10, 15 minutes. Why don't we</p> <p>9 pause there.</p> <p>10 MR. RISSMAN: Okay.</p> <p>11 THE VIDEOGRAPHER: Time is</p> <p>12 12:54 p.m. We are going off the</p> <p>13 record.</p> <p>14 (A lunch recess was held from</p> <p>15 12:54 p.m. to 1:41 p.m.)</p> <p>16 THE VIDEOGRAPHER: The time is</p> <p>17 1:41 p.m. We are back on the record.</p> <p>18 BY MR. COLEMAN:</p> <p>19 Q. Dr. Singer, did you discuss the</p> <p>20 substance of your testimony with counsel</p> <p>21 during the lunch break or any other break?</p> <p>22 A. Now I'm trying to remember what we</p> <p>23 discussed. I think we discussed where I was</p> <p>24 going to eat, but I think that nothing of</p> <p>25 substance, no. Like, how are you doing? Do</p>
<p>Page 162</p> <p>1 the price inflation that we are seeing during</p> <p>2 the conduct to the H1N1. I am already</p> <p>3 controlling for it.</p> <p>4 BY MR. COLEMAN:</p> <p>5 Q. That wasn't my question.</p> <p>6 My question was, in the but-for</p> <p>7 world, how much would producers have</p> <p>8 decreased the sow herd given the financial</p> <p>9 losses that they were incurring in this time</p> <p>10 period?</p> <p>11 MR. RISSMAN: Objection. And</p> <p>12 I'm going to instruct the witness that</p> <p>13 if he has an opinion on that he can</p> <p>14 give it, but if he doesn't -- hasn't</p> <p>15 performed that analysis, he shouldn't</p> <p>16 give an opinion.</p> <p>17 A. I haven't performed a</p> <p>18 decomposition of the output effect attributed</p> <p>19 to the challenged conduct and to nothing</p> <p>20 else.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. And the same answer is true with</p> <p>23 respect to number of farrowings or number of</p> <p>24 hogs being raised on farms, right?</p> <p>25 MR. RISSMAN: Same objection and</p>	<p>Page 162</p> <p>1 you feel all right? And stuff like that.</p> <p>2 Q. Before lunch, we were in the Pork</p> <p>3 Checkoff document, Exhibit 6.</p> <p>4 A. Okay.</p> <p>5 Q. And we are on Page 81 of the</p> <p>6 document.</p> <p>7 MR. COLEMAN: And, Jacob, if you</p> <p>8 could just get the profit and losses</p> <p>9 table on the screen.</p> <p>10 BY MR. COLEMAN:</p> <p>11 Q. Dr. Singer, do you understand that</p> <p>12 the profit and losses table here, the Iowa</p> <p>13 farrow-to-finish hog operations, is a</p> <p>14 graphical depiction of their relative</p> <p>15 profitability of hog farms?</p> <p>16 A. That's what it reports to show,</p> <p>17 yes.</p> <p>18 Q. And if we look at the period of</p> <p>19 2009 to 2010, that appears to be -- those</p> <p>20 appear to be years in which there were a</p> <p>21 significant -- a period of significant</p> <p>22 unprofitability for those hog operations,</p> <p>23 right?</p> <p>24 A. Well, it goes back up. So there's</p> <p>25 oscillation just over time. There's periods</p>

<p>1 of large profits and they go through bad 2 periods and they go through large profits 3 again. It seems like that pattern repeats 4 itself over time.</p> <p>5 Q. Yeah. And I think that's a fair 6 point.</p> <p>7 Are you familiar with the concept 8 of the hog cycle?</p> <p>9 A. I have come across it. I don't 10 know if I can give you a definition realtime.</p> <p>11 Q. And are you familiar with the 12 concept as reflected in the chart we are 13 looking at, that there's a longstanding cycle 14 in which we have oscillations from 15 unprofitability to profitability for hog 16 operations?</p> <p>17 A. Yes.</p> <p>18 Q. Are you familiar with that?</p> <p>19 A. Yes.</p> <p>20 Q. And are you familiar with the 21 reality in periods of profitability, hog 22 farmers tend to expand production, and in 23 periods of unprofitability, they tend to 24 contract?</p> <p>25 MR. RISSMAN: Object to form.</p>	<p>Page 165</p> <p>1 to be correlated. And then when I look back 2 prior to that, when our conduct variable is 3 equal to zero, it's also not going to be 4 correlated.</p> <p>5 There is periods where it's 6 profitable, and it goes unprofitable, as you 7 say. So I don't think that this is going to 8 explain away the effect that we are capturing 9 in the conduct period.</p> <p>10 Q. I didn't ask that question. I 11 didn't offer a theory. I just asked whether 12 you're familiar with the fact that over a 13 period of decades, there is something called 14 a hog cycle in which there are periods of 15 unprofitability and hog farmers expand and 16 periods -- I am sorry, periods of 17 unprofitability in which they can track and 18 periods of profitability in which hog farmers 19 tend to expand.</p> <p>20 Are you familiar with that or not?</p> <p>21 MR. RISSMAN: Object to form.</p> <p>22 A. Not the --</p> <p>23 MR. RISSMAN: Hold on. Hold on. 24 Object to form. Incomplete 25 hypothetical.</p>
<p>Page 166</p> <p>1 Overbroad and incomplete hypothetical.</p> <p>2 A. I'm not necessarily familiar with 3 the expansion and contraction, but I will 4 leave it at that.</p> <p>5 BY MR. COLEMAN:</p> <p>6 Q. Is that something you studied or 7 accounted for?</p> <p>8 A. Well, I certainly accounted for 9 what was going on in the upstream market in 10 two ways in my progression model. And what 11 these profitability figures are showing me, 12 big losses in '09 and big gains in '10, that 13 seems to suggest that profitability is not 14 going to be correlated with the challenged 15 conduct, right.</p> <p>16 So I think the theory -- the 17 alternative theory that you're offering is 18 that I omitted some -- some variable 19 profitability that would explain the price 20 increases that we observed during the class 21 period and just from what -- what I've seen, 22 you haven't shown me the full time series.</p> <p>23 But the fact that you've got 24 losses in '09 and big gains in '10, tells me, 25 at least for those two years, it's not going</p>	<p>Page 166</p> <p>1 A. Not the expansion and contraction 2 part, but I do have some familiarity with the 3 idea that profitability goes in waves. So I 4 will give you that part of it.</p> <p>5 I don't see evidence right here 6 that production upstream could be explained 7 with variations in profitability. It's 8 possible. But you haven't established that 9 through this exhibit.</p> <p>10 BY MR. COLEMAN:</p> <p>11 Q. Sure. Would that surprise you if 12 producers respond to the relative 13 profitability of their operation by expanding 14 or contracting?</p> <p>15 MR. RISSMAN: Object to form.</p> <p>16 A. I think -- I think they might try 17 to do that, but, you know, I would want to 18 see evidence that those things are 19 correlated, but even if they were, I don't 20 think I'm missing anything in my regression 21 level.</p> <p>22 Q. If we turn to Page 93. Yeah, 23 right up there. US Breeding Herd, Quarterly.</p> <p>24 Have you examined the general -- 25 what's happened to the quantity of sows in</p>

<p style="text-align: right;">Page 169</p> <p>1 the breeding herd in the United States over 2 time?</p> <p>3 A. No. I have not examined that.</p> <p>4 I'm looking at the phenomenon in the relevant 5 market.</p> <p>6 Q. Well, one of the allegations in 7 the complaint that you address is a reduction 8 in the sow breeding herd, right?</p> <p>9 A. Among defendants, yes, that's an 10 allegation in the complaint. But I took your 11 question to mean have I been studying 12 upstream production at large across all 13 providers -- to independents over time, and I 14 have not done that.</p> <p>15 Q. And one thing we see from looking 16 at that chart is that there's a longstanding 17 reduction going back to the mid-'90s in the 18 size of the US breeding herd, right?</p> <p>19 A. Yes, I will grant you that the 20 blue line, which is not labeled here, but I 21 presume that's quarterly breeding herd -- 22 they've labeled the orange line but not the 23 blue line.</p> <p>24 You want to me the assume that the 25 blue line is quarterly breeding herd?</p>	<p style="text-align: right;">Page 171</p> <p>1 If we look at that period through 2 about 2008, the breeding herd was expanding, 3 right?</p> <p>4 A. Yeah. But still below its 5 long-term historical high. You're saying 6 there is a slight upturn in '04, '05, I will 7 grant you that. But you're still well below 8 where it was, you know, in the early '90s.</p> <p>9 Q. So how does your model account for 10 the long-term reduction in the size of the 11 swine breeding herd?</p> <p>12 A. Right. So if there's a trend like 13 this that is secular and occurring throughout 14 the data period, the period that we study, 15 then a linear time trend is going to capture 16 the effect of such trends.</p> <p>17 Q. But your data period dates to 18 2005, not to the early '90s, right?</p> <p>19 A. I would have to go back and check 20 when it goes. But the data period from 21 '05 -- what you're not showing me is what the 22 US breeding herd looks like past 2009. And 23 to the extent, I will say that, that the 24 trend is a linear trend -- linear downward, 25 that would be ticked up by the time trends.</p>
<p style="text-align: right;">Page 170</p> <p>1 Q. Let's look at the chart on the 2 right where it says, US breeding herd, 3 quarterly.</p> <p>4 A. Okay.</p> <p>5 Q. And that reflects that dating to 6 the mid-'90s, there's a significant reduction 7 over time in the size of the sow breeding 8 herd, right?</p> <p>9 A. Yeah. And a trend that looks like 10 that would be captured in my time trend, 11 right. So -- so to the extent it continues 12 doing that, then I feel comfortable that my 13 model would have accommodated that trend.</p> <p>14 Q. I'm surprised by that because, as 15 I understand it, your model measures a before 16 period of -- well, how many years before 17 2009?</p> <p>18 A. I think the data goes back -- I 19 would have to check to see when the beginning 20 of the data runs. I would have to go check 21 in the regression section how far it goes 22 back. Several years.</p> <p>23 Q. And what we see when looking at 24 the data, is that there was an uptick in the 25 breeding herd dating to 2004, 2005.</p>	<p style="text-align: right;">Page 172</p> <p>1 Q. And do you have any understanding 2 as to the reasons for a long-term reduction 3 in the US sow breeding herd?</p> <p>4 A. I think that the White House 5 report might offer the notion that if 6 independent farmers are being squeezed by 7 packers with significant buying power, that 8 could result in a reduction in output.</p> <p>9 Q. Any other reasons come to mind as 10 to why the sow herd would have been steadily 11 reducing over time?</p> <p>12 MR. RISSMAN: Objection.</p> <p>13 Foundation.</p> <p>14 A. No. Sitting here, I don't know if 15 I can give you other reasons.</p> <p>16 BY MR. COLEMAN:</p> <p>17 Q. If producers are able to produce 18 fewer gains and efficiency, genetic feed or 19 whatever, more piglets per sow, then it would 20 be economically prudent to reduce the number 21 of sows while still expanding production, 22 right?</p> <p>23 MR. RISSMAN: Object to form.</p> <p>24 And calls for incomplete hypothetical.</p> <p>25 A. Yeah. I don't think I could</p>

<p style="text-align: right;">Page 173</p> <p>1 answer that. I think that's outside the 2 scope of economists. You'd want to ask 3 probably a farmer that.</p> <p>4 BY MR. COLEMAN:</p> <p>5 Q. Or an agricultural economist, 6 right?</p> <p>7 A. No, these are the things that -- 8 you wouldn't go to an economist for the 9 technical explanations of how breeding works. 10 You want to go to a technical expert.</p> <p>11 Q. In any case, if we look at the 12 long-term trendline from the mid-'90s to the 13 end of the graph -- we'll say at the end of 14 2009, 2010, in that range, we would expect 15 some reduction if that trend continues in the 16 sow herd in subsequent years, right?</p> <p>17 MR. RISSMAN: Objection.</p> <p>18 Hypothetical.</p> <p>19 A. It's possible that that trend 20 persisted. And as I said before, if it did, 21 that would be the kind of phenomena that 22 would be captured by the linear time frame.</p> <p>23 BY MR. COLEMAN:</p> <p>24 Q. To the extent you looked at data 25 covering that full time period, right?</p>	<p style="text-align: right;">Page 175</p> <p>1 date of the preperiod. So let's keep the 2 record straight.</p> <p>3 But it looks like we have data 4 going back to January 1, 2005.</p> <p>5 Q. Right. And so your data did not 6 account for that long-term trend dated in the 7 mid-'90s of the sow herd being reduced, 8 right?</p> <p>9 A. Well, it's inappropriate and 10 uneconomic for you to say such a thing. The 11 data period does not cover that earlier 12 period, so to say it's not accounting for it 13 is just nonsensical.</p> <p>14 I account for phenomena that moved 15 prices around over the period I studied.</p> <p>16 Q. And the period you studied was 17 2005 going forward, right?</p> <p>18 A. Correct.</p> <p>19 Q. Fundamentally, your model controls 20 for certain variables that affect the supply 21 and demand for pork, right?</p> <p>22 A. Correct. In the relevant 23 market -- in the relevant processing market, 24 correct.</p> <p>25 Q. And you view that the hog market</p>
<p style="text-align: right;">Page 174</p> <p>1 A. We know what data I looked at, 2 right. So you're asking if I assume that it 3 continued a downward trend from 2009 onward. 4 I think our data went through something like 5 2020. Then that linear trend would be 6 captured by the time trend.</p> <p>7 Q. That's actually not what I'm 8 asking. You4 data does not predate 2005, 9 does it?</p> <p>10 A. I think you might be right. I 11 need to go back and check the initial period 12 and how we define the preperiod. I think 13 you're right, but I just would want to go 14 into the regression section and see the exact 15 start date of the regression data.</p> <p>16 If you want, I can go get that for 17 you.</p> <p>18 Q. Well, yeah. I think you should do 19 that. I mean, as I understand it, your model 20 is built on a comparison of a before period, 21 comparing that to the conspiracy period. So, 22 again, surprised that you don't know what the 23 before period is.</p> <p>24 A. No, no, no. I know what the 25 period is. I don't know the precise start</p>	<p style="text-align: right;">Page 176</p> <p>1 is not part of the relevant market?</p> <p>2 A. Absolutely not. It's a related 3 market. It's the upstream market. It's a 4 separate market, and I do control for certain 5 phenomena that are occurring up there, but my 6 aim -- the objective of the model is to 7 isolate the effect of the challenged conduct 8 on prices that direct and indirect consumers 9 paid in this antitrust litigation.</p> <p>10 Q. So you include variables that 11 control for hog costs, processing costs, 12 demand, trends over time, right?</p> <p>13 A. You have just given an incomplete 14 list. We could go to all the variables that 15 I got. But what I'm trying to do is capture 16 the supply and demand phenomena in the 17 relevant processing market.</p> <p>18 Q. So what I want to understand is 19 whether your model effectively means that any 20 other price increase is not correlated with 21 one of the control variables as defined by 22 you to be challenged conduct?</p> <p>23 A. I didn't understand that. Let's 24 say it -- let's say it back. Sorry. I just 25 didn't follow what you're saying.</p>

1     Q. Yeah. Is the implication of your 2 model that any price increases that occurred 3 during the class period not correlated with 4 one of your control variables is defined by 5 you to be challenged conduct? 6     A. No. That's not how I put it. 7     Q. How would you put it? 8     A. I would say what the model is 9 trying do is to isolate the inflation in 10 prices that can be attributed to the 11 challenged conduct by using a benchmark of a 12 clean preperiod controlling for all other 13 factors that could have influenced prices 14 over the data window. 15     Q. Are you familiar with the concept 16 of packer margins? 17     A. Well, I know what a packer margin 18 is. If you're asking what margin the packers 19 were earning... 20     Q. What is a packer margin? 21     A. Well, as I'm hearing you describe 22 it, margin has a very precise meaning in 23 economics, which is the difference between 24 the price and the cost, and you're asking for 25 packer. So that would be the margin for	Page 177  1 yields a certain set of primals, the belly, 2 the shoulders, butts, et cetera, right? 3     A. I haven't heard a question yet, 4 but -- 5         (Simultaneous unreportable 6 crosstalk.) 7     Q. I just want to make sure you 8 follow me. 9         When a packer slaughters a hog, it 10 cuts it up into primals. That carcass 11 yields, well, really, two of every primal, 12 right? 13     A. A what of every primal? I am 14 sorry. 15 BY MR. COLEMAN: 16     Q. Two. You get two bellies, two 17 ribs, two shoulders, two butts, right? 18     A. Okay. I will accept that's the 19 number you get when you cut it up. I don't 20 know if I've come across that yet, but go 21 ahead. 22     Q. You don't know what a hog carcass 23 produces? 24     A. I mean, I've got pictures 25 depicting what the hog carcass produces, but
Page 178  1 packers. 2     Q. Okay. Are you familiar with 3 industry term -- industry usage of the term 4 "packer margins"?' 5         MR. RISSMAN: Object to form. 6     A. Packer margins, you mean? 7 BY MR. COLEMAN: 8     Q. Yes. 9     A. It's possible I've come across 10 that term. And I have given you what my 11 understanding is as you have just described 12 it. 13     Q. So if we are just relying on your 14 definition of packer margins, if they're 15 negative, it's economically reasonable for a 16 processor to cut back its production, right? 17         MR. RISSMAN: Object to form. 18     Incomplete hypothetical. 19     A. And I would say not necessarily. 20 BY MR. COLEMAN: 21     Q. If a packer can purchase primals, 22 so we add up all the -- you understand what 23 primals are? 24     A. Yes. 25     Q. And if we add up -- a carcass	Page 180  1 I haven't stated it as two of each, but we 2 are symmetric animals, so that follows. 3     Q. Right. You get one snout and one 4 tail, but other than that, when it comes to 5 primals, there's two of the primals on each 6 hog that's slaughtered, right? 7     A. Okay. 8     Q. Not something that's occurred to 9 you before, I gather? 10     A. We haven't been -- I haven't -- 11 there's nowhere in my report that I discuss 12 two of each. I just talk about units, but go 13 ahead. 14     Q. If a -- and you understand that 15 there's a market -- there's the buying and 16 selling of primals that's distinct from a 17 market for hogs that -- for market hogs that 18 still need to be slaughtered, right? 19     A. I don't understand the question. 20     Q. Do you know, for example, whether 21 my client Hormel, in addition to harvesting 22 hogs, also purchases primals? 23     A. So are you asking, again, that -- 24 the fact that some processors are both -- are 25 vertically integrated in the sense that

<p style="text-align: right;">Page 181</p> <p>1 they're making the hogs themselves upstream 2 and also buying them?</p> <p>3 Q. No. I'm asking whether you -- I 4 mean, you're aware that Hormel, for example, 5 buys hogs to slaughter and run through its 6 plant, right?</p> <p>7 A. Yes.</p> <p>8 Q. Are you aware that it also goes 9 out and buys primals that have already been 10 slaughtered and cut up into primals by other 11 packers?</p> <p>12 A. They might do that, but that's not 13 something I studied. I'm looking at the 14 defendant sales data when they're the 15 processor.</p> <p>16 Q. And my question, again, was 17 whether you're aware of there being a market 18 for hogs ready to slaughter that's distinct 19 from a market for primals?</p> <p>20 A. No, I don't make that distinction 21 in my report. That's not how I define the 22 relevant market.</p> <p>23 Q. If a packer like Hormel is in the 24 position of being able to buy primals for 25 cheaper than the price of a market hog, it</p>	<p style="text-align: right;">Page 183</p> <p>1 months prior.</p> <p>2 Is that what you're asking about?</p> <p>3 Q. Yeah. Right. Yeah. And that's a 4 good clarification. And we should start 5 there.</p> <p>6 So, I mean, I think you recognize 7 that PDV [sic] was a significant industry 8 event, and you made efforts to account for 9 it, right?</p> <p>10 A. Correct, through the -- through 11 the pig loss ratio rate, and we also -- the 12 piglet loss rate, and we also provide in the 13 bottom of 119 as to why we lagged it. It's 14 roughly the time it takes for a pig to reach 15 slaughter maturity.</p> <p>16 Q. Yeah. I am sorry. Was it 17 Paragraph 119?</p> <p>18 A. Page 119, at the bottom.</p> <p>19 Q. Yeah. And why did you focus on 20 piglet loss as the right metric?</p> <p>21 A. Well, we thought piglet loss could 22 have an important power in explaining prices 23 in the -- in the processing market. So we 24 wanted to control for it, and we also thought 25 the PVD virus manifested its way through the</p>
<p style="text-align: right;">Page 182</p> <p>1 would make sense for Hormel or any other 2 processor in that position to do that, right?</p> <p>3 MR. RISSMAN: Object to form.</p> <p>4 Incomplete hypothetical.</p> <p>5 A. Yeah. I don't have an opinion 6 there. It's not something I studied.</p> <p>7 BY MR. COLEMAN:</p> <p>8 Q. What's a lag variable?</p> <p>9 A. A lag variable is that if you want 10 to allow for the possibility that the effect 11 of a variable doesn't occur in the instant 12 period but instead occurs in some future 13 period, you would use a lag effect.</p> <p>14 Q. And why did you apply a lag 15 variable to PVD?</p> <p>16 A. Because we think that that best 17 explains the data. That we don't see the 18 effect of the PVD until -- until a later 19 period. I would have to go back and see if 20 I've given a basis here.</p> <p>21 Strike that. We -- we are 22 using -- for that virus, we are using the 23 pork -- the pig mortality rate. We don't 24 have a separate variable for that -- for that 25 virus. We just have pig loss rate of six</p>	<p style="text-align: right;">Page 184</p> <p>1 piglet loss rate, so that would be a fine way 2 to put -- to account for it.</p> <p>3 Q. You aware of any other impacts of 4 PVD other than the piglet loss rate?</p> <p>5 A. No, I'm not.</p> <p>6 Q. And then coming back to the lag 7 variable, so we've got -- if you're 8 accounting for -- you're controlling for PVD, 9 you're focusing on piglet loss, explain why 10 it would be important to apply a lag variable 11 to piglet -- piglet loss numbers.</p> <p>12 A. Oh, so as I say, you wouldn't 13 expect to see any price effect for six months 14 because that's the time it takes for a pig to 15 reach slaughter maturity. So if you went 16 looking a price effect as soon as the piglet 17 loss rate changed, you might not see it.</p> <p>18 And my understanding is that we 19 tried it, you know, both in contemporaneous 20 and in lag terms, and the lag term did a 21 better job explaining variational data.</p> <p>22 Q. So you thought based on your 23 analysis, that was the appropriate way to 24 account for PVD, was to lag that -- the fact 25 of piglet mortality?</p>

<p>1       A. Well, I wouldn't quite put it that 2 way. I would say that the piglet loss rate 3 is accounting for more than just the PVD 4 virus, but it also accounts for the PVD 5 virus. So we didn't think a separate new 6 dummy variable was needed.</p> <p>7       Q. Yeah. And I'm interested 8 specifically in the decision to lag the 9 impact. That's rooted in the biology of the 10 pigs?</p> <p>11      A. Not only the biology of the pig 12 but also in explanatory power of the data. 13 So you could go back and you can remove the 14 lag and just use the contemporaneous pig loss 15 rate, right, and see which one does a better 16 job explaining variation prices.</p> <p>17      Q. Got it. So in your mind, the -- 18 applying the lag variable is the better way 19 to explain the impact of PVD?</p> <p>20      A. No. That's not what I'm saying. 21 I'm saying the lag variable is the better way 22 to explain the piglet loss rate. And I'm 23 capturing the PVD virus through the piglet 24 loss rate variable.</p> <p>25      You keep saying it as if the PVD</p>	<p>Page 185</p> <p>1 those bases.</p> <p>2       Q. And that's -- that's what -- 3 that's what you found here, was that it had 4 better explanatory power if you lagged the 5 impact?</p> <p>6       A. That's my understanding, yes.</p> <p>7       Q. Coming back for the -- the concept 8 of there being a marketplace for primals, and 9 ultimately -- is that, in your mind, an 10 upstream market, or is that part of the same 11 market?</p> <p>12      A. Well, I'm looking at defendants' 13 sales data, where they served as the 14 processor, and I think what you're asking is 15 what happens when some other party serves as 16 the processor. And sitting here, it sounds 17 like that would not be captured in our 18 database.</p> <p>19           It's conceivable it is, but I 20 would want to run that down. It is something 21 that -- it sounds like from your description 22 if they're not -- if they're not processing 23 it, I'd just query whether or not that's 24 going to be contained in our data.</p> <p>25      Q. So you recognize that a</p>
<p>1 virus was the only thing that I had in mind 2 when using and constructing this series. 3 It's not.</p> <p>4       Q. What else did you have in mind? 5           And I'm honestly not trying to put 6 words in your mouth or make any assumptions. 7 I just want you to explain what you're doing 8 and why you picked the lag variable.</p> <p>9           So what other -- what else were 10 you trying to account for other than PVD?</p> <p>11      A. Oh, anything that changes the 12 piglet loss rate, right. So anything that 13 changes it could, in theory, have an effect 14 on prices in the relevant market. I wanted 15 to control for that.</p> <p>16      Q. Okay. So -- but if you want to 17 understand the impact of piglet loss on 18 market prices, then it would be important to 19 lag the effect based on the biology of the 20 pig?</p> <p>21      A. I think that's one basis, but a 22 second basis is whether or not it does a 23 better job explaining variation in the 24 pricing data in the relevant market than the 25 unlagged, and so I want to look at both of</p>	<p>Page 186</p> <p>1 defendant's decision to export pork products 2 is not in itself evidence of a conspiracy, 3 right?</p> <p>4       A. I think that -- if that's all you 5 had, and the decision was unilaterally made, 6 you know, that would not constitute the basis 7 of an antitrust theory of harm.</p> <p>8       Q. Yeah. In fact, a decision to 9 export products can be perfectly rational and 10 consistent with a competitive environment, 11 right?</p> <p>12      A. Well, divorced from all the facts 13 of the case and in a vacuum, it could. But 14 if we look at record evidence, including the 15 evidence I mentioned earlier about, I think, 16 direct communications between CEOs on the 17 question of exporting and whether or not it 18 would be beneficial to the industry, you 19 know, everything is in context.</p> <p>20      Q. Was that important to your 21 analysis, that you believe there's been 22 direct communications between defendant CEOs 23 on exports?</p> <p>24      A. Well, it's important enough to 25 make it into my export section. And it's</p>

<p style="text-align: right;">Page 189</p> <p>1 important in the sense that it substantiates 2 part of the challenged conduct. I will leave 3 it at that.</p> <p>4 Q. But coming back to whether it may 5 be rational to export pork, it's not your 6 opinion that all exports of pork in the class 7 period were challenged conduct and unlawful, 8 right?</p> <p>9 MR. RISSMAN: Object to form.</p> <p>10 A. Well, remember, I -- I don't 11 consider exporting in the abstract to be a 12 restraint that is being challenged here. I 13 think that exporting, as I said many times 14 now, is one of several levers or mechanisms 15 by which domestic output was reduced.</p> <p>16 But I think that there's record 17 evidence that's consistent with plaintiff's 18 claims that the decision to export was made 19 on a coordinated basis. And just, you know, 20 sitting here, I could go through my report -- 21 I can spare you the pain, but we talk about 22 communications between CEOs regarding 23 exporting activity and also, you know, the 24 Agri Stat export report itself was allowing 25 the defendants to coordinate in their</p>	<p style="text-align: right;">Page 191</p> <p>1 A. Either at loss or just not as 2 profitable as selling in the US.</p> <p>3 Q. And on the other hand, if the 4 exports are more profitable than domestic 5 sales, it would not be fair to treat that as 6 challenged conduct, right?</p> <p>7 MR. RISSMAN: Object to form.</p> <p>8 Calls for a legal conclusion.</p> <p>9 A. Again, I'm not treating the 10 exporting as a restraint that is going to be 11 eliminated when I move to the but-for world. 12 It's one mechanism by which the defendants 13 allegedly reduced domestic supply.</p> <p>14 BY MR. COLEMAN:</p> <p>15 Q. Yeah. And so one thing you did 16 was you looked at qualitative evidence, and 17 you mentioned that there might have been 18 conversations among defendant CEOs about 19 exports as an example of that kind of 20 qualitative evidence, showing that there was 21 coordination on exports, right?</p> <p>22 A. As well as the Agri Stats export 23 report itself, yes.</p> <p>24 Q. Right. So I want to get your 25 understanding of qualitatively, how we assess</p>
<p style="text-align: right;">Page 190</p> <p>1 decisions of how much to export. 2 They can monitor each other's 3 decision making with respect to exporting, 4 see how much of the production was being 5 shipped abroad.</p> <p>6 BY MR. COLEMAN:</p> <p>7 Q. So if in some instances -- so if 8 one of the defendants was able to obtain a 9 higher price for a particular product by 10 exporting it, that's perfectly lawful, right?</p> <p>11 MR. RISSMAN: Object to form.</p> <p>12 Calls for a legal conclusion.</p> <p>13 A. I think I would have to know more 14 about the hypothetical, but I think I cite 15 the opposite in my report, which are 16 instances where exporting was occurring at a 17 lower price, but they were doing it for the 18 good of the -- you know, the alleged 19 conspiracy by suppressing prices in the 20 domestic market.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. What was notable about that, in 23 your mind, was the fact that, at least your 24 understanding, that there may have been 25 exports at a loss, I guess. Is that right?</p>	<p style="text-align: right;">Page 192</p> <p>1 any given export to determine whether it was 2 economically rational and reasonable or -- 3 or -- on the one hand or part of the 4 conspiracy on the other hand?</p> <p>5 A. Yeah. I would say that's a bit of 6 a fool's error. That certainly was not a 7 part of my scope or my study. I'm trying to 8 figure out the pricing model, what portion of 9 the price increase the defendants took that 10 could be attributed to the challenged 11 conduct.</p> <p>12 And I have an associated output 13 model. But I'm not trying to simulate what 14 exports would have been in the absence of a 15 challenged conduct. I have not done such an 16 analysis. And frankly, at this moment in 17 time, I'm not planning on doing such an 18 analysis on the merits.</p> <p>19 Q. So in your mind, it's not 20 important to determine whether any of the 21 defendants' exports in this time period 22 were -- in their economic interest, whether 23 or not there was a conspiracy?</p> <p>24 A. I'm not -- I'm not trying to 25 predict exports in the but-for world, and so</p>

<p style="text-align: right;">Page 193</p> <p>1 I'm trying to predict domestic output in the 2 but-for world. I don't know if there was a 3 model. There was certainly not anything that 4 I offered that would allow one to project 5 what exports would have looked like in a 6 but-for world.</p> <p>7 Q. Can you point to any particular 8 export by any defendant that you think was 9 the product of collusion?</p> <p>10 MR. RISSMAN: Object to form.</p> <p>11 A. I mean, I don't do that and, you 12 know, what I do instead is I review record 13 evidence that's consistent with the criteria 14 that economists have identified as being -- 15 as being supportive or indicative of 16 anticompetitive conduct.</p> <p>17 And so I told you, I looked at 18 CEOs communicating with each other directly 19 over export decision. The Agri Stats export 20 report itself provided information that would 21 allow monitoring among the defendants to -- 22 to increase -- artificially increase 23 exporting. But I never endeavored to 24 estimate for any given export of pork whether 25 that export, you know, was -- would or would</p>	<p style="text-align: right;">Page 195</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. And in Paragraph 219, you talk 3 about Smithfield predicting internally that 4 exports expected to be larger than the prior 5 year. Domestic -- decrease in domestic 6 availability should help keep pork prices 7 above prior year -- prior year through the 8 remainder of 2016.</p> <p>9 Sorry for stumbling. But that's 10 what it says, right --</p> <p>11 A. Yes.</p> <p>12 Q. -- the quoted portion of the 13 Smithfield document.</p> <p>14 And that does not refer to 15 defendant-to-defendant communication about 16 exports, right?</p> <p>17 A. I think defendant to defendant 18 might be 217. You're taking me to 219.</p> <p>19 Q. I'm sorry. 219. Yeah. Page 167.</p> <p>20 A. But so that paragraph in 219 -- 21 let's see. You just want me to look at that 22 one line about Smithfield?</p> <p>23 Q. Review the paragraph, and I think 24 at the end -- I don't know which excerpts in 25 your mind reflect defendant-to-defendant</p>
<p style="text-align: right;">Page 194</p> <p>1 not have occurred in the but-for world. I 2 don't do that.</p> <p>3 BY MR. COLEMAN:</p> <p>4 Q. Did you identify any particular 5 transaction by any defendant in which it 6 exported products at a price less than it 7 could obtain in the domestic market?</p> <p>8 A. I'm remembering one document -- I 9 think I mentioned this before -- where it 10 appeared that either it was at a loss or less 11 profitable, but yet it was still good for the 12 alleged cartel or the alleged conspiracy for 13 them to go forward with it anyway.</p> <p>14 Q. We may look at that. Is that a 15 Smithfield document? Do you think you know?</p> <p>16 A. It sounds right, but I can't 17 remember which -- which exact document it was 18 sitting here.</p> <p>19 Q. Can you turn to Page 167 of your 20 report.</p> <p>21 A. Sure.</p> <p>22 MR. COLEMAN: Jacob, if you 23 could pull up Exhibit 1, if it's 24 helpful, Page 167.</p> <p>25 THE WITNESS: Okay.</p>	<p style="text-align: right;">Page 196</p> <p>1 communications about exports.</p> <p>2 A. Let's -- (Simultaneous unreportable crosstalk.)</p> <p>5 A. Let's go to the bottom of 219. 6 Sorry. This is a Seaboard CEO using his 7 personal e-mail to tell Doug Clemens of 8 Clemens that he was, quote, glad to see you 9 were working on some higher value export 10 opportunities in Japan, Korea because that 11 will help take some of the pressure off of 12 domestic sales, end quote.</p> <p>13 Q. Yeah. Is that what had in mind 14 when you were thinking about CEO-to-CEO 15 communications between defendants?</p> <p>16 A. Yes.</p> <p>17 Q. Are you aware of any others?</p> <p>18 A. Sitting here, I don't think I'm 19 aware of any others, no.</p> <p>20 Q. Do you know whether in 2018, 21 Mr. Brenneman was the CEO of Seaboard?</p> <p>22 A. I mean, that's what the language 23 says there.</p> <p>24 Q. That's what you wrote?</p> <p>25 A. Yes, that's what I wrote.</p>

Page 197	Page 199
<p>1 Q. You would agree that it's      2 important to take care that actions      3 consistent with rational self-interest are      4 not treated as evidence of an antitrust      5 conspiracy, right?</p> <p>6 A. I think that's fair, yes.</p> <p>7 Q. And a good test for exports in      8 particular and whether an export raises      9 antitrust suspicions is whether the exports      10 are sold at prices in foreign markets below      11 what could have been achieved in the domestic      12 market, right?</p> <p>13 A. It's an indicator. I don't know      14 if it's a good test. I mean, if you get      15 communication between two CEOs coordinating      16 their export decision, at that point, I don't      17 need to know if the price is above or      18 below --</p> <p>19 (Reporter clarification.)</p> <p>20 A. -- some requisite level to      21 determine whether or not that's potentially      22 anticompetitive.</p> <p>23 Q. At that point, the fact of the CEO      24 correspondence sort of overrides whatever the      25 economics is in your mind?</p>	<p>1 about exports like four or five times in this      2 deposition. Is that fair?</p> <p>3 MR. RISSMAN: Object to form.</p> <p>4 You're asking questions, not just      5 referencing things.</p> <p>6 MR. COLEMAN: Yeah.</p> <p>7 A. Yes. I remember saying it, and      8 then you suggesting that I was making it up      9 and I was saying no, no, no, I remember it.      10 You said, no, we'll see about that.</p> <p>11 And so it's been kind of a bone of      12 contention today as whether or not this thing      13 exists. So, yes, we have mentioned it a lot,      14 and I was right.</p> <p>15 BY MR. COLEMAN:</p> <p>16 Q. You were right that you wrote that      17 allegation in your report, right?</p> <p>18 A. I was right that that record      19 evidence, consistent with collusion, was in      20 my report. You disputed that it was in my      21 report, and I couldn't remember the paragraph      22 when the report was closed, but now having      23 you taking me to Paragraph 219, it refreshes      24 my recollection.</p> <p>25 Q. And that's what you're relying on</p>
Page 198	Page 200
<p>1 A. No, not overrides the economics.      2 It is direct communication of a strategy that      3 is designed here, obviously, to support      4 higher domestic prices. It is consistent      5 with a cartel-like behavior, period, end of      6 story.</p> <p>7 It is economic -- it's an economic      8 analysis. It derives from an economic      9 criteria designed by economists to identify      10 conspiracies. So I just -- the way that you      11 phrase the question was just wrong.</p> <p>12 Q. That's fair. It sounds to me like      13 you view the correspondence between CEOs that      14 we discussed in 2019 as being important to      15 informing your analysis, right?</p> <p>16 A. I mean, it's important, but I      17 think that everything that I cite is      18 important. I don't want to give it any more      19 weight than any other documents that are      20 cited here. Just it's an important document      21 in the case that is supportive of the      22 allegations in the complaint for the      23 existence of a conspiracy.</p> <p>24 Q. I heard you reference a      25 conversation between CEOs of the defendant</p>	<p>1 as evidence of collusion between CEOs of      2 defendants?</p> <p>3 A. You know what --</p> <p>4 MR. RISSMAN: Object to form.</p> <p>5 Mischaracterizes his testimony.</p> <p>6 A. You know what section this is      7 coming in. It's coming in as the end of how      8 you can do a mapping of the evidence that I      9 reviewed so far of the plus factors, and -- I      10 will leave it at that.</p> <p>11 BY MR. COLEMAN:</p> <p>12 Q. Coming back to this idea again,      13 you don't -- you're not opining that all      14 exports that occurred during the class period      15 were the product of the alleged conspiracy,      16 right?</p> <p>17 MR. RISSMAN: Objection. Asked      18 and answered again.</p> <p>19 A. I don't know how I could better --      20 better say it. But it's not my opinion that      21 exports would be zero in the but-for world.      22 There's some amount of exports that would      23 continue to occur in the but-for world for      24 sure.</p> <p>25</p>

<p style="text-align: right;">Page 201</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. And I'm interested in whether a 3 reasonable approach to distinguishing between 4 roughly lawful valid exports on the one hand 5 and exports that are part of the conspiracy 6 on the other hand is whether the exports were 7 sold at prices in foreign markets below what 8 could have been achieved in the domestic 9 market.</p> <p>10 MR. RISSMAN: Objection. Asked 11 and answered.</p> <p>12 BY MR. COLEMAN:</p> <p>13 Q. Is there a reasonable way to 14 distinguish lawful from unlawful exports?</p> <p>15 MR. RISSMAN: Objection. Asked 16 and answered, and calls for a legal 17 conclusion.</p> <p>18 A. In the absence of direct evidence, 19 the two CEOs were coordinating in their 20 export decisions and one could look at the 21 price and whether or not the firm -- or the 22 defendant incurred a loss. That would be -- 23 if they did that could be indicative of 24 anticompetitive conduct.</p> <p>25 But I'm going to say, again, if</p>	<p style="text-align: right;">Page 203</p> <p>1 thousand times now -- that exports likely 2 increased in the actual world relative to the 3 but-for world because of the challenged 4 conduct to the extent it was part of the 5 scheme. But I don't think there's any chance 6 that I've failed to account properly for 7 exports when measuring the effect of the 8 challenged conduct and the single alleged 9 conspiracy to suppress output and raise 10 prices when we are looking at that on 11 domestic prices.</p> <p>12 Q. Do you agree that if a model 13 purports to show evidence of an antitrust 14 conspiracy, it should be sure to exclude or 15 control for economically rational decisions 16 that are in a firm's interests?</p> <p>17 A. Again, I'm not --</p> <p>18 MR. RISSMAN: Object to form.</p> <p>19 A. I'm not sure which model you're 20 referring to. Are you referring to my 21 regression model?</p> <p>22 BY MR. COLEMAN:</p> <p>23 Q. Just in general. If you're going 24 to offer antitrust -- you know, an 25 econometric model or an economic model in an</p>
<p style="text-align: right;">Page 202</p> <p>1 you have direct evidence of communication, if 2 you have a sort of evidence that we see from 3 Agri Stats where firms are able to monitor 4 each other's exports, right, then we don't 5 necessarily have to go and see if, in fact, 6 there was a profit sacrifice taken.</p> <p>7 I think the profit sacrifice is 8 helpful, and it certainly is indicative when 9 it happens, but it's not a necessary 10 condition.</p> <p>11 BY MR. COLEMAN:</p> <p>12 Q. Do you have any concerns that your 13 model could have -- could be treating 14 economically rational exports as challenged 15 conduct?</p> <p>16 A. No. I have no concerns -- are you 17 referring to my econometric model of prices?</p> <p>18 Q. Yes.</p> <p>19 A. Well, as you know, I'm only 20 looking domestic supply in my dependent 21 variable, and so I don't think there's any 22 way that I could be misattributing the 23 effects of the challenged conduct to 24 something else including levels of export.</p> <p>25 I feel like that -- I said this a</p>	<p style="text-align: right;">Page 204</p> <p>1 antitrust case purporting to quantify 2 anticompetitive activity or the economic 3 impact of economic activity, is it important 4 that the model exclude or control for 5 economically rational decisions that are in 6 the firm's interest?</p> <p>7 MR. RISSMAN: Object to form.</p> <p>8 A. Well, if we're talking about the 9 regression model, what's important to control 10 for are all of the phenomenon that could be 11 affecting pricing during the study period so 12 that you don't inadvertently attribute the 13 price effects that we're seeing to the 14 challenged conduct when, in fact, it's 15 something else including procompetitive 16 reasons.</p> <p>17 And I feel like I've done that.</p> <p>18 Nothing that you have said today caused my to 19 want to go back and add an additional control 20 variable.</p> <p>21 With respect to the qualitative 22 factors, you know, I'm following the criteria 23 that have been identified in the economic 24 literature by Suslow, and, you know, things 25 like inducements to collude and monitoring,</p>

<p style="text-align: right;">Page 205</p> <p>1 and so I'm kind of going through and looking 2 at the record evidence in light of that 3 three-pronged criteria, and I feel like the 4 evidence is consistent with the existence of 5 a conspiracy.</p> <p>6 And I think it's the combination 7 of the two. It's the fact that the 8 qualitative criteria satisfied and in 9 conjunction with the econometric model, it 10 gives me confidence that what I'm looking at 11 has the look and feel of a cartel -- 12 anticompetitive cartel.</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. If we go back to Tab 45, the Pork 15 Checkoff -- I got that as Exhibit 6 -- and go 16 to page -- let's go to Page 42.</p> <p>17 A. Okay.</p> <p>18 THE VIDEOGRAPHER: Did you say 19 42?</p> <p>20 MR. COLEMAN: Yeah.</p> <p>21 A. Okay. I'm at 42.</p> <p>22 BY MR. COLEMAN:</p> <p>23 Q. 1995, it says that: At the 24 request of producers, the Pork Checkoff 25 increases to 45 cents of 1 percent (45 cents</p>	<p style="text-align: right;">Page 207</p> <p>1 Checkoff is, no.</p> <p>2 Q. If we turn to the next page, 3 Page 43. It says: In 2003 -- the top of the 4 page -- the United States continues to export 5 more pork setting a new record for pork 6 experts for the 12th consecutive year.</p> <p>7 Do you see that?</p> <p>8 A. Yes.</p> <p>9 Q. Do you know whether the Pork 10 Checkoff actively supported the export of 11 pork produced in the United States?</p> <p>12 A. Actively supported it, no, I don't 13 know -- I don't know what you mean. Lobbying 14 for it? What do you mean by supporting it?</p> <p>15 Q. Sounds like you have no knowledge 16 here, so defining terms is not going to help 17 us.</p> <p>18 A. You used the word "support," which 19 is fairly ambiguous in that sentence. I 20 don't know what you mean by "support."</p> <p>21 Q. You understand whether American 22 pork producers, independent producers have 23 taken measures to support an increase exports 24 of pork produced in the United States?</p> <p>25 A. I think that someone selling pork</p>
<p style="text-align: right;">Page 206</p> <p>1 per hundred dollar value). This checkoff 2 rate stays the same until 2002.</p> <p>3 Do you see that?</p> <p>4 A. Yes.</p> <p>5 Q. And do you have any understanding 6 of how Pork Checkoff funds are raised?</p> <p>7 A. No. And it's not defined in the 8 bullet you give me. I mean, that's not even 9 a sentence. It just says Pork Checkoff 10 increases and presumes the reader knows how 11 Pork Checkout -- the institution is called 12 Pork Checkoff, and they've designed a metric 13 with the same name, Pork Checkoff, and they 14 say that their institution's name has 15 increased to .451 percent.</p> <p>16 I mean, just looking at that, it's 17 impossible to know what they are talking 18 about.</p> <p>19 Q. Yeah. And so -- not a test. But 20 I just want to know if you -- maybe 21 established this already, and I'm going to 22 get an asked and answered objection.</p> <p>23 But do you know what the Pork 24 Checkoff is?</p> <p>25 A. I don't recall what the Pork</p>	<p style="text-align: right;">Page 208</p> <p>1 would be looking for opportunities to make 2 export sales.</p> <p>3 Q. And not only that, but independent 4 hog producers have long supported exports of 5 domestically raised pork, right?</p> <p>6 MR. RISSMAN: Object to form. Foundation.</p> <p>7 A. I don't know if that's true.</p> <p>8 BY MR. COLEMAN:</p> <p>9 Q. The next page, Page 50 -- I'm 10 sorry. Page 44. I'm sorry. I'm sending you 11 on a goose chase.</p> <p>12 2005, it says that: America's 13 pork producers continue to grow sales abroad 14 with the United States becoming the largest 15 pork exporter.</p> <p>16 Do you see that?</p> <p>17 A. Yes.</p> <p>18 Q. And, again, that would appear to 19 indicate that America's pork producers, the 20 mission of theirs to expand pork exports, 21 right?</p> <p>22 MR. RISSMAN: Object to form and foundation.</p> <p>23 A. It just says that America's pork</p>

<p style="text-align: right;">Page 209</p> <p>1 producers continue to grow sales abroad, with 2 the United States as one of the largest pork 3 exporters.</p> <p>4 BY MR. COLEMAN:</p> <p>5 Q. And if we looked on the next page, 6 2007, so on Page 45, it says: US pork 7 exports broke records for the 16th 8 consecutive years -- year. Exports totaled 9 1.3 million metric tons, nearly 2.9 billion 10 pounds at a value exceeding 3.15 billion.</p> <p>11 Do you see that?</p> <p>12 A. Yes.</p> <p>13 Q. And you don't dispute this was an 14 effort by independent pork producers, right?</p> <p>15 MR. RISSMAN: Object to form.</p> <p>16 Foundation.</p> <p>17 A. I don't think from that bullet you 18 can tell that it's effort from independent 19 pork producers. I don't know how you get 20 that from that bullet.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. I am asking about your knowledge.</p> <p>23 A. Oh. I don't know -- I don't know 24 what independent pork producers were 25 advocating in 2007.</p>	<p style="text-align: right;">Page 211</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. But you do offer the opinion that 3 increase in exports raised the price of pork, 4 right?</p> <p>5 A. I offer record evidence suggesting 6 that that was the effect and that was the 7 understanding of the defendants in the case, 8 that they could move pork outside of the US 9 and put it abroad, that it could cause the 10 prices in the US to rise.</p> <p>11 Q. And if the price of pork 12 increases, the value of hogs increased, 13 right?</p> <p>14 MR. RISSMAN: Objection. Same 15 instruction. If you have an opinion 16 you're offering in this case, you can 17 give it; otherwise, you shouldn't 18 answer.</p> <p>19 A. Yeah, that's not an opinion that 20 I'm offering in this case.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. So you don't know one way or the 23 other whether increased exports over time 24 have raised hog values and supported domestic 25 production of hogs?</p>
<p style="text-align: right;">Page 210</p> <p>1 Q. Increased exports is good -- are 2 good for independent pork producers, right?</p> <p>3 MR. RISSMAN: Object to form.</p> <p>4 And instruct the witness to only 5 answer questions he's -- has an 6 opinion about.</p> <p>7 A. Well, I don't have an opinion on 8 those.</p> <p>9 BY MR. COLEMAN:</p> <p>10 Q. Do you have -- you don't have 11 opinion one way or the other whether 12 increased exports benefit independent hog 13 farmers?</p> <p>14 MR. RISSMAN: I will just 15 clarify that I mean an opinion in this 16 case.</p> <p>17 A. No, I haven't offered an opinion 18 in this case on that.</p> <p>19 BY MR. COLEMAN:</p> <p>20 Q. Do you have any opinion as to 21 whether increased exports of pork have over 22 time encouraged the expansion of domestic hog 23 farms?</p> <p>24 MR. RISSMAN: Same instruction.</p> <p>25 A. Not in this case, no.</p>	<p style="text-align: right;">Page 212</p> <p>1 MR. RISSMAN: Same instruction.</p> <p>2 A. I don't have an opinion, and that 3 would require a different model unrelated to 4 the relevant market here. It would be 5 modeling production upstream.</p> <p>6 BY MR. COLEMAN:</p> <p>7 Q. Well, it would increase quantity 8 of hogs and ultimately pork, right? More 9 hogs are being produced on American farms?</p> <p>10 MR. RISSMAN: Object to form.</p> <p>11 And same instruction.</p> <p>12 A. You said "it." I'm not sure what 13 the "it" is. What's the trigger that 14 supposedly increases production upstream?</p> <p>15 BY MR. COLEMAN:</p> <p>16 Q. Higher hog value would encourage 17 farmers to grow more hogs, right?</p> <p>18 MR. RISSMAN: Same instruction.</p> <p>19 A. Yeah. I'm not offering an opinion 20 there. I do use, you know, cost of the -- 21 the cost of the -- to raise the hog is an 22 explanatory variable of prices in the 23 relevant market. But I hear your question 24 as, you know, whether there's some kind of 25 feedback effect in the upstream market. I</p>

<p>1 haven't studied that.</p> <p>2 MR. COLEMAN: Jacob, can you go 3 to Page 104. There we go. It's 4 called the chart -- I'm interested in 5 the chart with the header: US Pork 6 Exports.</p> <p>7 BY MR. COLEMAN:</p> <p>8 Q. And that chart shows that dating 9 to the mid-'90s, when NAFTA was signed, 10 there's been a steady upward tick in US pork 11 exports, right?</p> <p>12 A. Correct.</p> <p>13 Q. And that long predates the class 14 period and the control period -- the before 15 period that you used, right?</p> <p>16 MR. RISSMAN: Object to form.</p> <p>17 Mischaracterizes the document.</p> <p>18 A. What I will say is that this -- 19 this trend of increasing exports predates the 20 class period.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. And it also predates the before 23 period that is 2005 to 2008, right?</p> <p>24 A. Correct. And I'm not -- I'm 25 studying prices. I'm not trying to come up</p>	<p>Page 213</p> <p>1 but-for world.</p> <p>2 You know, I didn't do that. I can 3 tell you what the graph would look like is 4 that it would still continue going upward. 5 It just wouldn't have gone up by as fast a 6 rate as it did absent the challenged conduct.</p> <p>7 BY MR. COLEMAN:</p> <p>8 Q. How would you go about modeling 9 what exports would have looked like in the 10 but-for world?</p> <p>11 A. I think I would need just to aim 12 my machinery not at prices but at exports. I 13 would try making exports the dependent 14 variable, but, you know, that's not how I set 15 about establishing anticompetitive injury 16 here.</p> <p>17 Maybe some other expert is 18 interested in doing that, but I'm not trying 19 to come up with a decomposition, as I told 20 you, of the causes of the domestic reduction. 21 We can see it very clearly in one of my first 22 figures where we show that the domestic 23 production fell below trend.</p> <p>24 And, you know, what I'm trying to 25 figure out is how much of that domestic</p>
<p>Page 214</p> <p>1 with an empirical model to predict output or 2 exports. I'm setting the effect of the 3 alleged conspiracy on prices in my 4 econometric model.</p> <p>5 Q. I mean, another interesting thing 6 about this graph is that the first-time 7 exports declined from NAFTA in 1994 to the 8 end of the graph is 2009, the first year 9 where there's supposed cartel in which 10 there's a conspiracy to export pork, right?</p> <p>11 MR. RISSMAN: Object to form.</p> <p>12 A. So the conspiracy is not 13 exclusively about exporting. We have 14 mentioned this now about ten times. But 15 exporting is one of several levers that the 16 defendants allegedly use to reduce domestic 17 supply.</p> <p>18 The fact that it fell in '9 19 relative to this stupendous year in '8 isn't 20 all that remarkable. What I want to see is 21 -- '9 is still an impressive upward trend 22 relative to all preceding years except for 23 '8, and I want to see what the trend looked 24 like beyond that if I were inclined to model 25 what exports would have looked like in a</p>	<p>Page 214</p> <p>Page 216</p> <p>1 production declined can be attributed to the 2 challenged conduct. And I -- you're familiar 3 with my output section. It turns on the 4 price effects and the own price of elasticity 5 of demand faced by the defendants.</p> <p>6 Q. So we have a snapshot of the 7 preconspiracy period. What happened to 8 exports on the post-conspiracy period?</p> <p>9 A. You mean after 2018?</p> <p>10 Q. Yes.</p> <p>11 A. Sitting here, I can't tell you 12 what happened.</p> <p>13 Q. So you're not aware that pork 14 exports increased 11 percent in 2020, for 15 example?</p> <p>16 A. No, but that wouldn't surprise me. 17 It seems like just as the world markets are 18 growing, especially the demand for 19 US-produced pork, I would expect that exports 20 would trend up over time.</p> <p>21 That doesn't mean the -- an 22 agreement to shift into overdrive could not 23 have amplified or accelerated exports over 24 what it would have been in the absence of the 25 challenged conduct. There's a secular trend</p>

<p style="text-align: right;">Page 217</p> <p>1 upward. So the fact that it continues to go 2 up, I don't think is dispositive to tell us 3 what the effect of the challenged conduct was 4 on exports.</p> <p>5 Q. And included in your answer is a 6 recognition that there's been increasing 7 demand for US agricultural products including 8 pork over time, right?</p> <p>9 MR. RISSMAN: Object to form.</p> <p>10 A. I think that that's fair, and 11 that's why I control for certain things in my 12 regression -- in my price regression model. 13 It's not an export model. It's a price 14 regression model, including a time trend.</p> <p>15 BY MR. COLEMAN:</p> <p>16 Q. Did you control for foreign demand 17 for US pork?</p> <p>18 A. Well, like I just said, the time 19 trend might capture it. Let me look just to 20 see if there are any other variables that 21 might pick that up.</p> <p>22 Well, the only other variable that 23 I think would pick that up -- I mean, 24 everything could be affected in theory, but 25 the most logical is that real GDP per capita</p>	<p style="text-align: right;">Page 219</p> <p>1 Q. Did you control for the foreign 2 production of hogs in Japan, China, Russia, 3 et cetera?</p> <p>4 A. No, I did not and, you know, 5 there's a technical problem in doing that, is 6 that we want to avoid putting quantities on the 7 right-hand side of a price regression. This 8 model reduced for a price regression, so if 9 you introduce quantities, you can encounter 10 what econometrician call the endogeneity 11 problems.</p> <p>12 So we -- we are trying to come up 13 with variables that move the supply and 14 demand around for the product at issue 15 without bringing quantities explicitly into the 16 model.</p> <p>17 Q. If foreign production of pork 18 drops because of disease, drought, any other 19 factors like that, that might increase demand 20 for US pork, right?</p> <p>21 MR. RISSMAN: Object to form.</p> <p>22 Incomplete hypothetical.</p> <p>23 A. You could tell all sorts of 24 stories, but the problem is that if foreign 25 production is a function of the US pork</p>
<p style="text-align: right;">Page 218</p> <p>1 would increase with exports generally. And 2 so if exports generally were going up over 3 time, then real GDP per capita could capture 4 that as well.</p> <p>5 But I think the time trend is 6 probably what's most aimed at capturing a 7 steady secular trend -- upward trend exports 8 for US pork.</p> <p>9 Q. Did it control for perceptions 10 about the safety or quality of US pork, 11 whether positive or --</p> <p>12 A. Sure. Sure. That's the swine flu 13 flag.</p> <p>14 Q. Anything else?</p> <p>15 A. No. I think that's the one that 16 would have affected US consumers' perception 17 of the quality of pork or the safety of pork.</p> <p>18 Q. Do you have any sense of whether 19 there's been anything else that's affected 20 the foreign perceptions of the safety or 21 quality of US pork?</p> <p>22 A. In my model, I don't think that 23 I've got other things that are capturing 24 foreign perceptions of US safety besides the 25 variable that captures the swine flu.</p>	<p style="text-align: right;">Page 220</p> <p>1 price, then it cannot enter the right-hand 2 side of a regression model. You would have 3 to come up with some instrument for foreign 4 production.</p> <p>5 BY MR. COLEMAN:</p> <p>6 Q. You control for currency 7 fluctuations?</p> <p>8 A. I think in one model we do, but I 9 would have to kind of go through this. It 10 might not be until we do the passthrough. 11 But it seems -- it seems familiar, but it's 12 possible. I would just have to look through.</p> <p>13 Q. Do you control for trade 14 agreements or trade policies?</p> <p>15 A. No, we don't control for trade 16 policies.</p> <p>17 Q. There were been several in the 18 class period, right, that would impact the 19 demand for US pork?</p> <p>20 A. During the class period? I mean, 21 NAFTA would predate the class period. Maybe 22 you can tell me which trade policies you have 23 in mind from 2014 forward.</p> <p>24 Q. Nothing comes to mind as you sit 25 here today?</p>

<p style="text-align: right;">Page 221</p> <p>1 A. The big trade agreements I think 2 predated 2014, but you could tell me which 3 one you have in mind, or not.</p> <p>4 Q. Did you control for actions by 5 other countries increasing or decreasing 6 restrictions on US pork?</p> <p>7 A. No. Because we are looking at 8 domestic pork sales, and this is -- it would 9 be meant for the US market. So looking at 10 restrictions in foreign countries would be 11 irrelevant.</p> <p>12 Q. Well, so, for example, if a 13 country lifts the restriction on ractopamine 14 or imposes a restriction on ractopamine used 15 in pigs, that might affect foreign demand for 16 domestically raised pigs, right?</p> <p>17 A. I'm not modeling domestically 18 raised pigs. I'm looking at sales of pork 19 into the United States. I'm not looking at 20 exports. These are just domestic production 21 for domestic consumption.</p> <p>22 Q. Well, you're -- one of the levers 23 of the supposed conspiracy is increasing 24 exports, right?</p> <p>25 A. One of the levers that were</p>	<p style="text-align: right;">Page 223</p> <p>1 A. In part, but that was just one of 2 three different levers, and then also the 3 price increases -- the artificial price 4 increases would have reduced output as well.</p> <p>5 Q. Go to Tab 60.</p> <p>6 A. Okay.</p> <p>7 Q. Do you understand that the US 8 Department of Agriculture has actively 9 promoted the export of pork among other 10 domestically raised agricultural products?</p> <p>11 A. Well, I mean, now that I'm looking 12 at this document, I can't help from doing it. 13 I think that the USDA might do that in 14 general, but I can accept this premise, that 15 that's one of their missions is to help 16 export US products.</p> <p>17 Q. And, in fact, do you recognize 18 that the 2014 farm bill, part of its mission 19 to increase -- the Department of Agriculture 20 increase exports by promoting domestically 21 raised products like pork and other products?</p> <p>22 MR. RISSMAN: Objection.</p> <p>23 Foundation.</p> <p>24 A. Yeah. I mean, the first paragraph 25 says something to that effect.</p>
<p style="text-align: right;">Page 222</p> <p>1 designed to reduce the supply for the 2 domestic consumption was exporting. That is 3 correct.</p> <p>4 Q. And I think we have gone through a 5 number of things that could -- factors that 6 could influence the export of US pork, right?</p> <p>7 MR. RISSMAN: Object to form.</p> <p>8 And that mischaracterizes the 9 testimony.</p> <p>10 A. Sitting here, I don't recall the 11 factors -- if we have identified factors that 12 influence exports. We just talked about the 13 secular trend of increasing exports over 14 time.</p> <p>15 BY MR. COLEMAN:</p> <p>16 Q. Well, do you deny that the 17 relative value of US dollar for currency 18 fluctuation would affect foreign demand for 19 US pork?</p> <p>20 A. It could affect foreign demand, 21 but that's not what I'm modeling. I'm not 22 modeling exports. I'm modeling domestic 23 consumption of pork.</p> <p>24 Q. And your view is that exports were 25 used to lower domestic consumption, right?</p>	<p style="text-align: right;">Page 224</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. You are not aware of that on your 3 own?</p> <p>4 A. Sitting here, I don't have -- I 5 did not -- I did not study the ramifications 6 of the 2014 farm bill.</p> <p>7 Q. It allocated a significant amount 8 of money to promoting USA pork, right -- 9 exports of US pork?</p> <p>10 MR. RISSMAN: Object to form.</p> <p>11 A. You can't know that from the -- at 12 least the first paragraph.</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. Did you control for whatever 15 impact the government's promotion of US pork 16 might have had?</p> <p>17 A. No, because I'm not modeling -- 18 sorry. I thought you were done. Sorry. Why 19 don't you go ahead.</p> <p>20 Q. No, go ahead. I'm good.</p> <p>21 A. I'm not modeling the export 22 markets. I'm modeling domestic consumption. 23 So what the government is doing to promote 24 exports is beyond the scope of what I'm 25 investigating.</p>

Page 225	Page 227
<p>1 Q. I'm having a hard time      2 understanding that because, on the one hand,      3 you're telling me that there was a      4 conspiracy -- one of the levers of which was      5 to increase exports for the purpose of      6 increasing prices in the US.</p> <p>7 On the other hand, you're telling      8 me you're just uninterested in whether the      9 government was actively promoting exports and      10 what impact that might have had on increased      11 exports during the class period.</p> <p>12 How should I be reconciling that      13 in my mind?</p> <p>14 MR. RISSMAN: Object to --</p> <p>15 A. I said if I were --</p> <p>16 MR. RISSMAN: Hold on.</p> <p>17 Object to form. Argumentative.</p> <p>18 A. Yeah, if I were interested in      19 modeling exports, this would be a reasonable      20 inquiry. But I'm not intent on demonstrating      21 anticompetitive effects here through some      22 model of exports that showed exports being in      23 excess of what they otherwise would have been      24 in the absence of a challenged conduct.</p> <p>25 That's not my -- that's not my</p>	<p>1 definition, sure.</p> <p>2 Q. For example, ham would be a good      3 example. Do you have any insights into how      4 much ham the United States exports?</p> <p>5 A. No.</p> <p>6 Q. You didn't look at that?</p> <p>7 A. I don't offer an export model, and      8 I'm not using an estimate of exports as my      9 proof of antitrust injury here.</p> <p>10 Q. You're also aware that there's a      11 significant amount of exports of offal and      12 what are sometimes referred to as variety      13 meats, right?</p> <p>14 A. Variety meats? Yes. I missed the      15 first -- the first word that you said. Did      16 you say offal?</p> <p>17 Q. Offal. Offal. I pronounce it as      18 offal because it's closer to what these      19 products actually sound like.</p> <p>20 A. Okay.</p> <p>21 Q. Right? Are you familiar with what      22 offal is?</p> <p>23 A. I'm familiar -- I've come across      24 some variety once. I don't know if I have      25 come across offal.</p>
Page 226	Page 228
<p>1 model. It's not what I set out to do. It      2 could be an interesting academic exercise,      3 but it's not in my report. It's not in proof      4 of impact. We can talk about alternative      5 models that I didn't put forward until we are      6 blue in the face, but all I can do today is      7 defend my model, the logic of my model, the      8 control variables of my model, and my model      9 is a price model in the domestic market.</p> <p>10 BY MR. COLEMAN:</p> <p>11 Q. So are you able to distinguish      12 exports -- increases in exports that are      13 attributable to the US government promoting      14 US pork versus exports that resulted from the      15 supposed conspiracy?</p> <p>16 A. I don't aim to do that. I am not      17 modeling exports. I don't have an export      18 model.</p> <p>19 Q. And you're aware that many of the      20 exports of pork products from the United      21 States or other countries include products      22 that are not class products, using your      23 definition, right?</p> <p>24 A. It is conceivable that some of US      25 exports of pork sit outside of the class</p>	<p>1 Q. Are you familiar with the fact      2 that -- well, the defendants increase -- I am      3 sorry, export a significant amount of pig      4 parts like bungs, snouts, organ meat to other      5 markets?</p> <p>6 A. I'm sure they -- I am sure they      7 could.</p> <p>8 MR. RISSMAN: Object to form.</p> <p>9 A. I am sorry.</p> <p>10 I'm sure they could. It's outside      11 of the class definition, outside of the      12 market that I'm interested in setting, which      13 is domestic consumption. So all the things      14 that are happening outside of scope of my      15 study, I'm not studying by definition.</p> <p>16 BY MR. COLEMAN:</p> <p>17 Q. Do the data on which you relied to      18 assess US exports include offal and variety      19 meats?</p> <p>20 A. No. I widow out everything that      21 doesn't meet the class definition before      22 running my model.</p> <p>23 Q. What data set were you using for      24 that?</p> <p>25 A. Defendants' data.</p>

Page 229	Page 231
<p>1 Q. You were using defendants' data of 2 exports?</p> <p>3 A. No. I'm not looking at exports. 4 I don't know how many times I have to say 5 this. I'm looking at defendants' domestic 6 sales -- the transaction data for domestic 7 sales. But after I removed exports, I then 8 remove everything that doesn't meet the class 9 definition.</p> <p>10 Q. So exports are a lever of the 11 supposed conspiracy, but you're not able to 12 point to any particular export of a class 13 product by any defendant in the class period?</p> <p>14 A. Liquidation and harvest reduction 15 are also levers by which output was reduced, 16 and I don't have variables on the right-hand 17 side to capture those strategies either.</p> <p>18 I'm using a conduct dummy that 19 tracks when Agri Stats started sharing 20 competitively sensitive information among 21 defendants. That's my measure of the 22 challenged conduct, not these ancillary 23 mechanisms by which output was suppressed. I 24 don't want to have three or four conduct 25 variables in my model.</p>	<p>1 liquidation section and see which defendants 2 are described there.</p> <p>3 Q. Is Smithfield one of them?</p> <p>4 A. I believe so. But I can't do this 5 by memory. Do you want turn to the section? 6 160 -- Page 160.</p> <p>7 Q. Go ahead.</p> <p>8 A. Smithfield is mentioned in 9 Paragraph 211 and 212.</p> <p>10 Q. Are you aware of any other 11 defendant that increased its sow herd -- 12 decreased its sow herd in the class period?</p> <p>13 A. Well, we are talking about in 14 2012. We mentioned Tyson and Seaboard, and 15 then we are talk in 210 about this industry 16 council that appeared to be intent on 17 reducing the sow herd.</p> <p>18 Q. Yeah. What were you referring to 19 specifically with the industry council?</p> <p>20 A. This Producer Packer Industry 21 Council, PPIC. It's in the middle of 210.</p> <p>22 Q. Yeah. And who participates in 23 that NIPC [sic] organization?</p> <p>24 A. Well, if you look at Footnote 394, 25 it says the PPIC meeting invitation was sent</p>
Page 230	Page 232
<p>1 I just want one, and it turns to 2 one in the year 2009 when Agri Stats launched 3 certain documents that would support or 4 facilitate the alleged conspiracy here.</p> <p>5 Q. So you are not able -- sitting 6 here today, you're not able to point to a 7 single sale -- a foreign sale of a pork 8 product in the class period that you are able 9 to identify as caused by the conspiracy?</p> <p>10 MR. RISSMAN: Object to form.</p> <p>11 A. It just was not an objective of 12 mine. It wasn't part of the assignment to go 13 and do a decomposition of exports of those 14 that would have occurred in the but-for world 15 and those that occurred in the actual. That 16 was not part of my assignment.</p> <p>17 BY MR. COLEMAN:</p> <p>18 Q. Can you call up Tab 27.</p> <p>19 So how did -- a challenged conduct 20 that's been alleged and one of the levers of 21 the supposed conspiracy that you point to is 22 a reduction in the sow herd by Smithfield, 23 and I think there's also an allegation about 24 Tyson, right?</p> <p>25 A. We would have to go to my</p>	<p>1 to Clemens, Hormel, JBS, Seaboard and 2 Smithfield and Tyson.</p> <p>3 Q. Are those the only participants?</p> <p>4 A. For this document. I mean, it's 5 conceivable that others were participating, 6 but I mean, that would be enough.</p> <p>7 Q. Well, if there are any number of 8 independent producers and others in the 9 room --</p> <p>10 A. No, no. These are -- these are 11 packers. This has nothing to do with 12 upstream. So these are -- these are -- 13 (Simultaneous unreportable 14 crosstalk.)</p> <p>15 Q. Do you know whether the -- I am 16 sorry.</p> <p>17 A. Can I finish?</p> <p>18 Q. Yeah, you can finish.</p> <p>19 A. To clarify what I meant, these -- 20 this isn't -- an invitation to reduce the sow 21 herd that was sent to the defendant packers 22 could only affect the upstream production 23 done by the defendant packers. It couldn't 24 implicate the independents from my read of 25 this.</p>

Page 233	Page 235
<p>1 Q. So your reading of the document      2 that you're citing is that was specifically a      3 meeting limited to the packers; is that      4 right?</p> <p>5 MR. RISSMAN: Objection. Form.</p> <p>6 A. Well, Footnote 340 -- 394 lists      7 the defendants who received it, but I      8 can't -- I can't rule out the possibility      9 that others received the same -- the same      10 note.</p> <p>11 BY MR. COLEMAN:</p> <p>12 Q. Let's be real. You have no idea,      13 right?</p> <p>14 MR. RISSMAN: Objection. It's      15 just argumentative and rude and      16 disrespectful.</p> <p>17 MR. COLEMAN: Well, he's making      18 it up as he goes along.</p> <p>19 MR. RISSMAN: Well, that's just,      20 again, so unprofessional. You can      21 just ignore that question, Dr. Singer.      22 It's not a real question.</p> <p>23 (Reporter clarification.)</p> <p>24 BY MR. COLEMAN:</p> <p>25 Q. Who was in that meeting, the</p>	<p>1 don't know.</p> <p>2 BY MR. COLEMAN:</p> <p>3 Q. Yeah. Okay. So let's come back      4 to Paragraph 212.</p> <p>5 A. Okay.</p> <p>6 Q. There's a reference to Smithfield      7 liquidating 130,000 sows in 2009, right?</p> <p>8 A. Yes.</p> <p>9 Q. And a reference to Tyson      10 liquidating 20,000 sows in 2009, right?</p> <p>11 A. Yes.</p> <p>12 Q. And Seaboard liquidating 30,000      13 sows in 2009, right?</p> <p>14 A. Yes.</p> <p>15 Q. And you wrote that, right, that      16 sentence?</p> <p>17 A. Yes.</p> <p>18 Q. You stand by it?</p> <p>19 A. Yes.</p> <p>20 Q. And what did you do to investigate      21 that Seaboard liquidated 30,000 sows in 2009?</p> <p>22 A. I've got two sources for it in      23 403.</p> <p>24 Q. What are they?</p> <p>25 A. Well, one is the TFP that ends in</p>
Page 234	Page 236
<p>1 Producer Packer Industry Council meeting?</p> <p>2 A. Well, it says -- the language here      3 says that it was an industrywide      4 recommendation.</p> <p>5 Q. Did you write that?</p> <p>6 A. Yes.</p> <p>7 Q. So you must have had some      8 knowledge about what you were writing at the      9 time, right?</p> <p>10 A. Well, to me what was important was      11 the fact that I highlighted it, which was      12 that it was sent out to the defendants. You      13 are asking me who else it was sent out to. I      14 don't know who else it was sent out to.</p> <p>15 Q. It's an industrywide      16 recommendation. You don't know whether that      17 include -- that industrywide recommendation      18 included the 70 percent of hog production      19 that's controlled by independent producers,      20 do you?</p> <p>21 MR. RISSMAN: Object to form.</p> <p>22 A. I don't know for a fact. I mean,      23 it's a reasonable inference from the language      24 there, but you're asking do I know for a fact      25 who received it. I don't. Sitting here, I</p>	<p>1 765, and then SPF that ends in 924.</p> <p>2 Q. And as you sit here today, you      3 continue to believe it's true that Seaboard      4 liquidated 30,000 sows in 2009?</p> <p>5 A. Yeah, that's -- yes.</p> <p>6 Q. Are you aware of any other sow      7 reduction in the class period by any other      8 defendant?</p> <p>9 A. Well, you're just looking at 212,      10 but I think that -- I think 212 captures each      11 of the defendants that I'm aware of that      12 liquidated sows in 2009 or during the conduct      13 period.</p> <p>14 Q. Focusing on Smithfield, do you      15 have any idea what its -- whether it was      16 suffering operating losses in 2009?</p> <p>17 A. No.</p> <p>18 Q. Do you know whether it was losing      19 money on its hog production operation?</p> <p>20 A. You just asked me about its      21 upstream division?</p> <p>22 Q. Yeah, its production of hogs.</p> <p>23 A. No. I don't know that.</p> <p>24 Q. Do you know whether it had good      25 economic reasons for liquidating 130,000</p>

<p>1 sows?</p> <p>2 MR. RISSMAN: Object to form.</p> <p>3 A. No. I don't know what the</p> <p>4 economic reasons was for that liquidation.</p> <p>5 BY MR. COLEMAN:</p> <p>6 Q. And same question for Tyson. Do</p> <p>7 you know whether Tyson was facing losses on</p> <p>8 its hog production operation in 2009?</p> <p>9 A. No idea.</p> <p>10 Q. And do you know whether the</p> <p>11 liquidation of 20,000 sows by Tyson in 2009</p> <p>12 benefited its overall profitability?</p> <p>13 MR. RISSMAN: Object to form.</p> <p>14 A. I think that if you go by what you</p> <p>15 said on -- in Paragraph 210, that liquidation</p> <p>16 was needed to improve profitability of the</p> <p>17 upstream industry, and so my surmise would be</p> <p>18 that as a result of the liquidation that we</p> <p>19 saw, that immediately followed that, that</p> <p>20 assisted the upstream industry.</p> <p>21 MR. COLEMAN: I think we are at</p> <p>22 a point where we are about on the</p> <p>23 90-minute cadence. So we can take a</p> <p>24 pause.</p> <p>25 MR. RISSMAN: Sounds good.</p>	<p>Page 237</p> <p>1 A. I don't know. Let me -- let me go</p> <p>2 to 47.</p> <p>3 Q. Yeah. Take your time.</p> <p>4 A. Okay. Let me see.</p> <p>5 Okay.</p> <p>6 Q. And on Page 5007, Page 10 of the</p> <p>7 document -- yeah, we are on the right spot --</p> <p>8 there's a section on pork trade update.</p> <p>9 Are you with me?</p> <p>10 A. Yes.</p> <p>11 Q. And in the middle of the</p> <p>12 paragraph, it says: Effects from the FMD</p> <p>13 crisis in South Korea and the nuclear</p> <p>14 concerns in Japan caused export surges during</p> <p>15 the spring, and China has stepped up again</p> <p>16 during the second half of year, resulted in</p> <p>17 much stronger exports than anticipated</p> <p>18 heading into the year.</p> <p>19 Do you see that?</p> <p>20 A. Yes.</p> <p>21 Q. Do you know what the FMD crisis in</p> <p>22 South Korea was about?</p> <p>23 A. No.</p> <p>24 Q. In any case, nothing in that</p> <p>25 paragraph relates to the purported</p>
<p>Page 238</p> <p>1 THE VIDEOGRAPHER: The time is</p> <p>2 3:13 p.m. We are going off the</p> <p>3 record.</p> <p>4 (A brief recess was held from</p> <p>5 3:13 p.m. to 3:25 p.m.)</p> <p>6 THE VIDEOGRAPHER: The time is</p> <p>7 3:25 p.m., and we are back on the</p> <p>8 record.</p> <p>9 BY MR. COLEMAN:</p> <p>10 Q. Can you call up -- well, let's</p> <p>11 refer to -- first to Paragraph 42 of your</p> <p>12 report. It's about exports. And the first</p> <p>13 line of Paragraph 42 is: The evidence</p> <p>14 indicates starting around 2009, defendant</p> <p>15 processors and Agri Stats made exporting pork</p> <p>16 to keep it out of the US market a deliberate</p> <p>17 strategy, right?</p> <p>18 A. Yes.</p> <p>19 Q. You wrote -- and you cite some</p> <p>20 documents that you believe support that</p> <p>21 proposition, right?</p> <p>22 A. Yes.</p> <p>23 Q. And one of the documents you cited</p> <p>24 is -- we see at Tab 47, the Bates number</p> <p>25 SPF00294998, right?</p>	<p>Page 240</p> <p>1 conspiracy, does it?</p> <p>2 A. I would have to read the whole</p> <p>3 paragraph. Just give me one second. You</p> <p>4 just want me to address that paragraph?</p> <p>5 Q. Sure.</p> <p>6 A. Hold on one second.</p> <p>7 I think I grant you that the rest</p> <p>8 of those examples provided in that paragraph</p> <p>9 seem to be unrelated to the challenge</p> <p>10 conduct.</p> <p>11 Q. And this is an independent, or at</p> <p>12 least nondefendant -- the document was</p> <p>13 produced by Informa Economics, which is a</p> <p>14 nondefendant, right?</p> <p>15 A. Well, they're a nondefendant.</p> <p>16 They might work for defendants, but they're</p> <p>17 not a defendant. That's correct.</p> <p>18 Q. And Informa Economics doesn't say</p> <p>19 anything about deliberate strategy of pork</p> <p>20 producers to coordinate on export of pork</p> <p>21 products, does it?</p> <p>22 A. That's correct. Fair.</p> <p>23 Q. At the end of that paragraph, it</p> <p>24 says: Informa is of the belief that a</p> <p>25 forecast of a 4 percent decline in exports in</p>

Page 241	Page 243
<p>1 2012 is being optimistic and could have some 2 downside risk.</p> <p>3 Do you see that?</p> <p>4 A. Yes.</p> <p>5 Q. And, in fact, there was a decline 6 in exports that year, right?</p> <p>7 MR. RISSMAN: Objection.</p> <p>8 Mischaracterizes the document.</p> <p>9 A. Well, it -- you couldn't know that 10 from the document because the document was 11 produced in '11, so I can't tell you what 12 happened in '12.</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. This was a forecast. Informa 15 was -- their forecast of the market was there 16 would be a decline in exports, and my 17 question is whether you know whether that 18 actually happened?</p> <p>19 A. No, I don't.</p> <p>20 Q. And we go to 5002 -- yeah. So go 21 up above that graph.</p> <p>22 A. Okay.</p> <p>23 Q. There's a reference to culling the 24 sow herd, and it says: In particular, but 25 given the strength in cull sow prices,</p>	<p>1 sow herd.</p> <p>2 Do you have an opinion on that?</p> <p>3 A. No, I don't have opinion, but I 4 would -- I think it's consistent with the 5 theory of harm, with the allegations in the 6 case, that some liquidation would have 7 occurred even in a but-for world. I don't 8 think that the theory of harm posits that 9 liquidation would be zero.</p> <p>10 And there could be good 11 justification for a particular liquidation.</p> <p>12 The -- the theory of harm as spelled out in 13 the complaint is that there are -- some of 14 the incremental liquidation that occurred can 15 be attributed to the challenged conducts.</p> <p>16 Q. And you -- you don't quantify how 17 much?</p> <p>18 A. I'm trying to estimate prices in 19 the processor market, and that meant -- 20 exercise to me is an academic one. It would 21 not inform what I'm trying to estimate in my 22 report.</p> <p>23 Q. In any case, the replacement of 24 older sows with younger and fresher genetics 25 would be procompetitive, right?</p>
Page 242	Page 244
<p>1 producers were able to replace the older sows 2 with younger and fresher genetics are 3 receiving the top value for the culs.</p> <p>4 Do you see that?</p> <p>5 A. Yes.</p> <p>6 Q. But did your model account for the 7 price that Tyson or Smithfield obtained for 8 the sows that they liquidated?</p> <p>9 A. No. I'm trying to estimate prices 10 in a different market -- in a relevant market 11 here to process for clients, so I'm trying to 12 control --</p> <p>13 (Simultaneous unreportable 14 crosstalk.)</p> <p>15 MR. COLEMAN: In any case --</p> <p>16 MR. RISSMAN: Let the witness 17 complete his question.</p> <p>18 A. I just wanted to add that I'm 19 trying to control for factors that would 20 affect prices in the relevant market, not in 21 the upstream market.</p> <p>22 BY MR. COLEMAN:</p> <p>23 Q. Yeah. I'm just interested in 24 whether Smithfield made -- or Tyson made 25 economically sound decisions to cull their</p>	<p>1 MR. RISSMAN: Object to form. 2 Calls for a legal conclusion. 3 A. I don't think that that 4 motivation, as you have just described it, 5 has any kind of anticompetitive tint to it.</p> <p>6 BY MR. COLEMAN:</p> <p>7 Q. Coming back to the -- there was 8 some question and answer earlier about the 9 benchmark period versus the conspiracy 10 period.</p> <p>11 So to some extent, I think you've 12 addressed this already, but I want to revisit 13 it. I will just ask you, how did you go 14 about choosing the benchmark period?</p> <p>15 A. Well, the benchmark period was a 16 clean period in which the alleged challenged 17 conduct -- I should say, in which the 18 challenged conduct was absent. And so that's 19 the 2005 to 2008 period that we are using as 20 the clean period.</p> <p>21 Q. And Paragraph 151 of your 22 report -- and I will give you a minute to get 23 there.</p> <p>24 A. Paragraph -- give it to me again. 25 Q. 151. This is in your</p>

<p>1 quantitative.</p> <p>2 A. Okay.</p> <p>3 Q. You write that the -- quote, the</p> <p>4 percentage change in price associated with</p> <p>5 the challenged conduct is given by B1 or beta</p> <p>6 one --</p> <p>7 A. Right.</p> <p>8 Q. -- end quote, which I take is the</p> <p>9 regression coefficient for that dummy</p> <p>10 variable, right?</p> <p>11 A. Correct.</p> <p>12 MR. RISSMAN: I'm sorry. Craig,</p> <p>13 are you on -- you are on</p> <p>14 Paragraph 151?</p> <p>15 MR. COLEMAN: Yes.</p> <p>16 MR. RISSMAN: Okay. I think the</p> <p>17 screen is not with you.</p> <p>18 There we go.</p> <p>19 THE WITNESS: I'm looking at my</p> <p>20 report.</p> <p>21 BY MR. COLEMAN:</p> <p>22 Q. And it says: The equation above,</p> <p>23 the percentage change in price associated</p> <p>24 with challenged conduct is given by B1 or</p> <p>25 beta one, right?</p>	<p>Page 245</p> <p>1 the -- during the conduct period. It is</p> <p>2 telling us what the effect is across the</p> <p>3 entirety of the conduct period. So I will</p> <p>4 leave it that.</p> <p>5 Q. And can your model tell us the</p> <p>6 amount of overcharge in any particular time</p> <p>7 frame, like, say, a given month in a given</p> <p>8 year at any point in the time period?</p> <p>9 A. Well, you could -- using my model,</p> <p>10 you could go make a prediction within a</p> <p>11 particular month if you were very interested</p> <p>12 in a particular month for some reason. You</p> <p>13 could make a prediction of what the prices</p> <p>14 would have been in the absence of the</p> <p>15 challenged conduct, and you can compare those</p> <p>16 prices to the actual prices, if you were so</p> <p>17 inclined.</p> <p>18 Now, there's no apriority reason</p> <p>19 to do that given that the allegations are for</p> <p>20 an alleged conspiracy that spanned from 2009</p> <p>21 to 2018. So number one, you wouldn't be</p> <p>22 testing the theory of the case, the theory of</p> <p>23 harm.</p> <p>24 And number two, I haven't seen any</p> <p>25 -- I'm not aware of any record evidence that</p>
<p>Page 246</p> <p>1 A. Right.</p> <p>2 Q. And if the percentage changed</p> <p>3 given by beta one is positive, this implies</p> <p>4 the challenged conduct is associated with an</p> <p>5 increase in pork prices holding other factors</p> <p>6 constant, right?</p> <p>7 A. Correct.</p> <p>8 Q. Can you just explain how we should</p> <p>9 interpret percentage changes in beta one?</p> <p>10 What you mean by that?</p> <p>11 A. Right. So in a -- in a -- we do</p> <p>12 it -- e do it in levels in, and we do it in</p> <p>13 logs. And so I think the log model is</p> <p>14 probably the easiest one to explain, and that</p> <p>15 quite literally is telling you the percentage</p> <p>16 change in prices that can be attributed to</p> <p>17 the presence of the challenged conduct.</p> <p>18 Q. And so if we look at particular</p> <p>19 time periods, like, say, a month, like</p> <p>20 January 2010, just to pick an example, does</p> <p>21 your model tell us anything about the</p> <p>22 overcharge in that particular month?</p> <p>23 A. The way that the model is</p> <p>24 constructed now, it doesn't tell us anything</p> <p>25 specific about the particular month during</p>	<p>Page 248</p> <p>1 would suggest that we should go looking for a</p> <p>2 structural break in January of 2010; that is,</p> <p>3 there's no suggestion that the information</p> <p>4 exchange was any more or less wholesome in</p> <p>5 January of 2010.</p> <p>6 The information exchange of</p> <p>7 competitively sensitive information was the</p> <p>8 same across the challenged conduct -- across</p> <p>9 the conduct period.</p> <p>10 Q. Do you know whether every</p> <p>11 defendant subscribed to all the Agri Stats</p> <p>12 report throughout the time period?</p> <p>13 A. I got a chart that shows you which</p> <p>14 ones each defendant subscribed to in each</p> <p>15 year. But, you know, I know you want this to</p> <p>16 be a memorization test, but I can't tell you</p> <p>17 which boxes are checked by memory. We can go</p> <p>18 to the table.</p> <p>19 Q. Coming back to 151 and beta one in</p> <p>20 that line of questioning, so does it mean --</p> <p>21 is it your opinion that, for example, the</p> <p>22 direct purchasers of class products paid a</p> <p>23 12.8 percent overcharge in every month from</p> <p>24 January of 2009 to June of 2018?</p> <p>25 A. I think that the model I've</p>

<p style="text-align: right;">Page 249</p> <p>1 constructed, which constrains the parameter 2 to be the same across the challenged conduct 3 period -- the conduct period would suggest 4 that it was the same overcharge in each 5 month. That's correct.</p> <p>6 Q. So in each incremental month from 7 January 1, 2009, through the end of the 8 conspiracy period, it's your opinion that 9 there was an overcharge of a specified 10 amount.</p> <p>11 Here it's 12.8 percent for direct 12 purchasers of class products?</p> <p>13 A. I can conceive -- I think that in 14 reality that the inflation likely varied 15 slightly over time, but this model and this 16 specification, which constrains the parameter 17 to be the same across the entirety of the 18 conduct period, the best prediction that I 19 would have for your favorite month, which is 20 January 2010, would be the parameter is 21 estimated.</p> <p>22 Q. So does it mean that -- it's not 23 my favorite month. I'm just picking that as 24 an example, just to have a point of 25 reference.</p>	<p style="text-align: right;">Page 251</p> <p>1 one point in time, the model assumes that the 2 conspiracy had the same effect?</p> <p>3 A. The model doesn't assume it, 4 right. I'm constraining the parameter to be 5 the same across the conduct period. That's 6 my design because, as I told you, I think 7 that's most consistent with the plaintiff's 8 theory of harm as a single conspiracy that 9 spanned the duration of the conduct period.</p> <p>10 If I thought that plaintiffs were 11 asserting a series of mini conspiracies that 12 are stacked against each other in time, we 13 could have done something differently, but 14 that's not what I understand the theory of 15 harm to be.</p> <p>16 Q. Did you do anything to evaluate 17 whether there were periods during the class 18 period in which overcharges were less than 19 the average?</p> <p>20 A. No. You know, economics and 21 econometrics teachings is very clear in this, 22 that we don't go looking for structural 23 breaks without a good a priori reason. If 24 you do so, it is arbitrary, and you could 25 reach the wrong inference.</p>
<p style="text-align: right;">Page 250</p> <p>1 But is your testimony -- your 2 opinion mean that regardless of the specific 3 actions that defendants took, your model 4 assumes that the alleged conspiracy had the 5 same effect in every month?</p> <p>6 A. No, that's not -- that's not what 7 it means. The model as constructed here is 8 seeking to estimate an effect that stretched 9 over the entirety of the challenged conduct 10 for the conduct period. The plants are not 11 asserting a sequence of mini conspiracies, 12 you know, lasting one month apiece.</p> <p>13 If they were, if that were the 14 allegation, you know, we could go out and 15 test for differential effects by month, but 16 they're not. They're alleging a single 17 conspiracy that spanned the duration of the 18 conduct period, and I will leave it at that.</p> <p>19 Q. But the levers of the conspiracy 20 are multifaceted and -- whether it's exports 21 or sow reductions or something else?</p> <p>22 A. Or price hikes -- or price hikes, 23 yes.</p> <p>24 Q. Sure. And so is it your opinion 25 that regardless of what levers were pulled at</p>	<p style="text-align: right;">Page 252</p> <p>1 So, you know, I go back to this, 2 that what you're positing isn't consistent 3 with a theory of harm. And also there is no 4 a priori reason in the record to suggest that 5 the conspiracy would have turned off or would 6 have been less potent in January of 2010 than 7 in any other month.</p> <p>8 So for those reasons, I don't do 9 it. And economic -- econometric teachings 10 would counsel not doing it.</p> <p>11 Q. You are aware that there was a 12 significant expansion of processing capacity 13 late in the class period that was, you know, 14 planned for and -- as early 2014 or 2015, 15 right?</p> <p>16 MR. RISSMAN: Object to form.</p> <p>17 A. I don't have a variable for 18 processing capacity, so I can't say that 19 that's something that I have studied.</p> <p>20 BY MR. COLEMAN:</p> <p>21 Q. So, for example, Clemens opened a 22 new plant during the class period, right?</p> <p>23 A. It's possible they did.</p> <p>24 Q. And Triumph Seaboard opened a new 25 plant as well, right?</p>

<p style="text-align: right;">Page 253</p> <p>1 A. I mean, the class period is a very 2 long duration in time, so I would be 3 surprised if there were no openings. 4 Q. Really? I thought we had the 5 existence of a cartel restricting pork 6 supply. 7 A. You interpret that -- 8 (Simultaneous unreportable 9 crosstalk.) 10 A. I know -- I know of your 11 confusion, but go ahead. 12 Q. Well, I would have thought that 13 individual defendants investing tens or 14 hundreds of millions of dollars to build a 15 new packing plant to increase the supply of 16 pork products would be conduct dramatically 17 at odds with a conspiracy to restrict the 18 supply of pork, right? 19 A. Not at all. Not at all. 20 Q. Okay. Go ahead and explain. 21 A. Because you are interpreting the 22 conspiracy to mean that they -- it was a 23 conspiracy to shut output or keep their 24 capacity down to zero. That's not what's 25 being alleged. What is being alleged is that</p>	<p style="text-align: right;">Page 255</p> <p>1 the concept of a structural break in the 2 class period. And I would have thought that 3 an individual defendant's decision to invest 4 in a new packing plant and significantly 5 expand production would have been a good 6 example of that, and you could have tested 7 whether -- the impact of that on an 8 overcharge, right? 9 MR. RISSMAN: Objection. 10 Compound. 11 A. I think you're getting confused 12 about -- about how I construct the conduct 13 variable. The conduct variable is equal to 14 one with the advent of Agri Stats' reports 15 that permitted and facilitated cartel-like 16 behavior, right. 17 And so it sounds like what you're 18 saying is I should depart from my 19 construction of the conduct variable, the way 20 I've done it, and redo it whenever someone 21 expands capacity. 22 And so, no, no, that's not what 23 I'm trying to capture. I'm trying to capture 24 the effect of the challenged conduct on 25 prices controlling for all of the things.</p>
<p style="text-align: right;">Page 254</p> <p>1 they took actions to tamper output relative 2 to what it would have been in the but-for 3 world. 4 So it's conceivable that we could 5 see capacity growing over time, and the 6 relevant question is, you know, would 7 capacity have been greater in a but-for world 8 absent the challenged conduct. 9 I know you look at the -- at an 10 increase and say, aha, that's evidence that 11 there's no conspiracy, but that's not how an 12 economist looks at it. An economist is 13 thinking about the margin -- the marginal 14 effect of the challenged conduct on capacity 15 at any point in time. 16 So the mere fact that you have 17 something going up is largely irrelevant. 18 It's kind of, you know, something -- you will 19 hear lawyers say something like, oh, prices 20 fell, so, therefore, there couldn't have been 21 a price effect in that month. 22 No. The question is: Did prices 23 fall by less than they would have in the 24 absence of a conspiracy? 25 Q. Well, a structural -- you refer to</p>	<p style="text-align: right;">Page 256</p> <p>1 I'm not going to -- I'm not going to revisit 2 my construction of the conduct parameter in 3 light of new capacity coming. 4 BY MR. COLEMAN: 5 Q. Your testimony was that there was 6 a conspiracy to -- I believe the word you 7 used was tamp down the supply of pork, right? 8 A. Domestic supply of pork, yes. 9 Q. And a decision by defendants to 10 build new packing plants is at odds with 11 that -- the goal of that conspiracy, isn't 12 it? 13 A. No, because the relevant question 14 is what the capacity would have looked like 15 in a but-for world absent the challenged 16 conduct. So the fact that you can point to 17 an episode of capacity expansion, right, 18 doesn't tell me anything about the effect of 19 the conduct on capacity. 20 And moreover, I just want to kind 21 of refocus. I'm trying to predict the effect 22 of the alleged conspiracy on pricing. My 23 model is a pricing model. I'm not trying to 24 predict capacity in the marketplace. Had 25 I've done so, then, you know, it would have</p>

1 been a completely different model with 2 completely different control variables, but 3 that's not what I'm trying to model.  4 Q. How many pork processing plants 5 would have been built in the class period but 6 for the conspiracy?  7 A. Again, I'm not -- I am modeling 8 capacity. Had my model been pointed at 9 capacity, I could tell you the answer to that 10 question. I'm trying to model the effect of 11 prices from the challenged conduct.  12 Q. You're telling me that capacity 13 was constrained in the world that you studied 14 versus the but-for world, and that my 15 question is missing the mark because in the 16 but-for world, there would have been 17 something better than what actually happened, 18 and I want to know how.  19 A. Right. So in the qualitative 20 section -- I think that there may be 21 confusion about my two models. So I have 22 one -- I have a quantitative model. That's a 23 regression model. It's trying to model the 24 prices in the but-for world.  25 And in the qualitative section, I	Page 257  1 I did read your report and took note of 2 allegations about -- or claims about Saturday 3 shifts being reduced, and wondering 4 whether you think there was any agreement, 5 coordination, otherwise about the 6 construction of new packing plants? 7 MR. RISSMAN: Objection. Calls 8 for a legal conclusion. 9 A. Well, I don't include that in the 10 levers that I review. If you look at the 11 levers I review, liquidation concerns the 12 upstream market, and then harvest reduction 13 and exports, which concerns the relevant 14 processing market. Exports being things that 15 would have otherwise sold -- some of which 16 would have otherwise sold in the United 17 States. 18 So as I hear your question, a 19 conspiracy to reduce capacity with other -- 20 with other providers. Is that what -- is 21 that what the question is? 22 BY MR. COLEMAN: 23 Q. Yeah. And I guess -- I mean, to 24 cut to the chase, you don't have any reason 25 to believe that there would have been more
Page 258  1 am looking at record evidence that's 2 consistent with the allegations of the 3 complaint, namely, an attempt to suppress 4 output. And I point to a lot of record 5 evidence that's consistent with that. And so 6 when I see record evidence that suggests that 7 firms are coordinating the decisions on 8 output, that tells me that that coordination 9 allowed them to lower output relative to the 10 but-for world.  11 That does not tell me that output 12 has to be falling necessarily in the actual 13 world. It just tells me that output is lower 14 than it would have been absent the conduct.  15 Q. And with respect to processing 16 capacity, are you referring to the Saturday 17 shifts or something else?  18 A. Anything. I have a -- I have an 19 entire -- I will send you to the section of 20 my report where I try to inform the 21 three-part test that economists use to make 22 qualitative assessments of a likelihood of a 23 conspiracy.  24 Q. Well, I'm focused on what conduct 25 occurred that restricted processing capacity.	Page 259  1 packing plants but for the conspiracy? 2 MR. RISSMAN: Objection. I'm 3 going to instruct the witness to only 4 testify to that if he has an opinion 5 on that and is offering that in this 6 case. 7 A. I'm not offering that. I don't 8 have an opinion there. 9 BY MR. COLEMAN: 10 Q. And so, again, I'm getting at your 11 testimony here. You admonished me for not 12 properly comparing the world that happened to 13 the but-for world, and I want to know what 14 the but-for world would have looked like. 15 We don't know whether there would 16 have been -- you don't know or haven't 17 offered an opinion about whether there would 18 have been more packing plants, right? 19 A. I'm not offering an opinion on the 20 number of packing -- packing plants, no. 21 Q. And I mean, is your opinion that 22 there would have been more Saturday shifts 23 run in the but-for world? 24 A. I cite to evidence suggesting 25 that -- that some of these decisions with

<p style="text-align: right;">Page 261</p> <p>1 respect to harvest reduction could have been      2 flown from -- or could have -- could have      3 been motivated by or could have occurred as a      4 result of the challenged conduct, but I'm not      5 offering an opinion as to -- as to the number      6 of Saturdays that would have been operational      7 in the but-for world. I'm not offering on      8 opinion on that.</p> <p>9 Q. And when you point to decisions      10 about, quote/unquote, harvest reductions, are      11 you aware or are you pointing to any      12 decisions by any defendant to reduce its      13 annual harvest of hogs during that class      14 period?</p> <p>15 A. Well, I think that -- we can go to      16 that section, but I think that I do give      17 episodes of defendants making decisions to      18 reduce their harvest.</p> <p>19 Q. I'm specifically interested in the      20 concept of the annual harvest versus a      21 Saturday shift and that -- the timing of      22 harvest.</p> <p>23 Do you know whether any defendant      24 reduced the number of harvest days, for      25 example, in a year during the class period?</p>	<p style="text-align: right;">Page 263</p> <p>1 A. Well, you are -- you are accepting      2 that they were doing it for maintenance      3 reasons. The question is whether or not this      4 shutdown was derived from the challenged      5 conduct.</p> <p>6 Q. And you don't know, do you?</p> <p>7 A. Well, I --</p> <p>8 MR. RISSMAN: Object to form.</p> <p>9 A. I'm offering evidence that's      10 consistent with the alleged conspiracy,      11 right. It's hard for me to say here      12 definitively that that came from it, but, you      13 know, I mean, the record evidence says what      14 it says.</p> <p>15 BY MR. COLEMAN:</p> <p>16 Q. There's a lot of conduct that you      17 say is consistent with challenged conduct,      18 but in this instance, it's also consistent      19 with Smithfield's plant needing maintenance,      20 right?</p> <p>21 MR. RISSMAN: Object to form.</p> <p>22 BY MR. COLEMAN:</p> <p>23 Q. How do we know which is which?</p> <p>24 MR. RISSMAN: Object to form.</p> <p>25 A. I think that some record evidence</p>
<p style="text-align: right;">Page 262</p> <p>1 A. Well, I think that if you shut      2 down Saturdays, that would affect the number      3 of days in the year.</p> <p>4 Q. Did any defendant shut down      5 Saturdays?</p> <p>6 A. I think we have discussed this      7 before.</p> <p>8 Q. Episodically, maybe a Saturday      9 here or there. But did any defendant reduce      10 the number of harvest days they had year to      11 year?</p> <p>12 A. No. We can go through each line,      13 you know, in 164. An internal Hormel e-mail      14 states that Smithfield shut down their Tar      15 Heel plant last week -- one day last week,      16 and they are doing the same this week for      17 maintenance, which Hormel said was more like      18 manipulating the market, and it was doing      19 it -- doing the same for hams.</p> <p>20 Q. Did that reduce Smithfield's      21 annual production that year?</p> <p>22 A. It could have.</p> <p>23 Q. Is it anticompetitive to reduce      24 the plant for maintenance or to close the      25 plant for maintenance?</p>	<p style="text-align: right;">Page 264</p> <p>1 in the qualitative section is more consistent      2 with -- with conduct from a cartel than      3 others, and then there's some evidence that      4 could be consistent with both.</p> <p>5 And I feel like I'm not prepared      6 to make a determination that that evidence      7 alone has constituted anticompetitive      8 conduct. What my position is, and has been      9 all along, is that it's the combination of      10 the quantitative model that shows unexplained      11 inflation among defendants' prices during the      12 conduct period, plus the record evidence,      13 that allows me to conclude that this conduct      14 is more consistent with the cartel than with      15 unilateral behavior.</p> <p>16 BY MR. COLEMAN:</p> <p>17 Q. Are you aware of any specific      18 Saturday slaughter that a defendant decided      19 to go or you can pinpoint it to a deliberate      20 effort to facilitate the supposed conspiracy?</p> <p>21 MR. RISSMAN: Objection. Calls      22 for a legal conclusion.</p> <p>23 A. Yeah. I don't know how one would      24 go about designing a test for something like      25 that. So what I did was -- you saw what I</p>

<p>1 did. I've reviewed evidence that's 2 consistent with -- 3 BY MR. COLEMAN: 4 Q. Right. 5 A. -- a decision to reduce output as 6 part of a coordinated information-sharing 7 scheme.</p> <p>8 Q. Is there a single document that 9 you reviewed in which a defendant indicates 10 that it chose not to run a Saturday shift 11 because it wanted to facilitate a conspiracy 12 to reduce pork supply?</p> <p>13 A. I don't think that you're going to 14 find a document -- I mean, it's possible, but 15 I've cited one -- but I don't think you're 16 going to find, generally, documents that say, 17 the reason why we are doing this is to 18 promote the well being of our conspiracy.</p> <p>19 I mean, defendants aren't going to 20 put something like that in writing. So what 21 we have to do instead is we have to look at 22 the quantitative evidence of the pricing, 23 which I've done, and see if there was an 24 unexplained price hike around the time the 25 challenged conduct. And then we look at</p>	<p>Page 265</p> <p>1 A. Okay. 2 Q. And so the first question is: 3 What's the expected sign for the price of 4 pork substitutes, i.e., beef -- the beef, 5 chicken price index? 6 A. Positive. 7 Q. And why is that? 8 A. That as the price of a week 9 substitute goes up, the demand for pork 10 should go up as well, and that would put 11 upward pressure on prices. 12 Q. If we looked at Paragraph 192 and 13 Table 23, does it appear that you have a 14 negative sign on the beef, chicken price 15 index? 16 A. I think you just pointed me to 17 the -- I'm on Paragraph 160. Do you want me 18 to change paragraphs? 19 Q. Yeah. Go ahead and look at 20 Table 23, which is attached to 192. 21 A. Sorry. Page 193? 22 Q. Paragraph 192. 23 A. Paragraph 192. I'm heading there. 24 Okay. I'm in Paragraph 192. 25 Q. And do you have a negative sign on</p>
<p>1 record evidence that's consistent with the 2 cartel and meets the economic criteria. 3 But I can tell you that I'm not 4 going to make a conclusion based exclusively 5 on the record evidence that I've looked at 6 under the qualitative criteria. All the 7 qualitative criteria can do for an economist 8 is kind of point in that direction or to show 9 that the hypothesis -- the anticompetitive 10 hypothesis is plausible. 11 And then I go out and I test the 12 hypothesis empirically, using the 13 quantitative methods. It's the combination 14 of the two. That allows me to make the 15 inference that I do that this -- this conduct 16 appears to be anticompetitive. 17 Q. Why don't you turn to 160. 18 A. Page 160? 19 Q. I am sorry. Paragraph 160 in your 20 report. 21 A. Okay. 22 Q. I will get there, too. Not that 23 I'm looking to quote it, but I just want to 24 orient you to what I am -- some of the 25 questions are directed.</p>	<p>Page 266</p> <p>1 the beef, chicken price index for your belly 2 by cut overcharge regression? 3 A. You can't see that from Table 23. 4 Q. Do you know whether you do? 5 A. No, I don't know whether I do. 6 Q. In your mind, the sign should be 7 positive, in any case? 8 A. It should be positive. But 9 sometimes the signs don't work out the way 10 you expect. But you're telling me for a 11 particular -- what did you think the sign was 12 negative for the belly? 13 Q. Yeah. The beef, chicken price 14 index -- 15 A. I know. But for which -- 16 Q. -- for the belly -- for the belly 17 by cut overcharge regression. 18 A. Yeah. I would have to look at the 19 coefficients, but I would note that the 20 belly, you know, accounts for the 3 percent 21 of the sales -- defendant sales, but it is -- 22 you know, I will leave it at that. I don't 23 know that it has the wrong sign. 24 Q. Okay. And how about your bacon by 25 cut overcharge regression? Do you know what</p>

Page 269	Page 271
<p>1 the sign was on that?</p> <p>2 A. On the --</p> <p>3 (Simultaneous unreportable</p> <p>4 crosstalk.)</p> <p>5 Q. If you don't, then I guess I would</p> <p>6 take what you would expect it to be.</p> <p>7 A. I would expect it to be positive,</p> <p>8 yes.</p> <p>9 Q. Would you -- I mean, sitting here</p> <p>10 today -- I'm not trying to put you on the</p> <p>11 spot, but would you think it was an error if</p> <p>12 it was negative?</p> <p>13 A. Oh, no. Oh, no. No, no, no.</p> <p>14 This happens all the time in econometrics,</p> <p>15 that you do a slice of the data for some</p> <p>16 subset of the cuts, and one of your 20</p> <p>17 control variables shows the wrong sign. I</p> <p>18 mean, does that cause you to lose faith in</p> <p>19 the model? Absolutely not.</p> <p>20 Q. And can you give any sort of</p> <p>21 description at what point you would start to</p> <p>22 have concerns about the model if it had</p> <p>23 unexpected results like that?</p> <p>24 A. No. I think that -- I think that</p> <p>25 we would evaluate the model as -- from</p>	<p>1 cite to Professor Wooldridge quite a bit as</p> <p>2 an authority on econometrics.</p> <p>3 Who is -- who is Professor</p> <p>4 Wooldridge, and why do you view him as</p> <p>5 authoritative?</p> <p>6 A. Well, he has one of the seminal</p> <p>7 textbooks on econometrics, and I've just been</p> <p>8 using it for a big portion of my career, and</p> <p>9 I think that even in grad school, it may have</p> <p>10 been the textbook that was used.</p> <p>11 Q. And do you accept him as</p> <p>12 authoritative on how to do econometrics?</p> <p>13 A. I do. I accept that textbook as</p> <p>14 being authoritative, yes.</p> <p>15 Q. What's the expected sign for GDP</p> <p>16 per capita? Again, if you -- you could use</p> <p>17 Paragraph 160 as a reference point, if it's</p> <p>18 helpful.</p> <p>19 A. It should be positive.</p> <p>20 Q. And why is that?</p> <p>21 A. That all things equal, an increase</p> <p>22 in income would put upward pressure on prices</p> <p>23 in the relevant market.</p> <p>24 Q. Okay. And how about the expected</p> <p>25 sign for hog costs?</p>
Page 270	Page 272
<p>1 Table 12 on Page 125. This is across all</p> <p>2 cuts and controlling for the cut type, you</p> <p>3 know, in the fixed effects. I've got</p> <p>4 processor product and then processor product</p> <p>5 customer.</p> <p>6 And there's where, I think, we</p> <p>7 would make an evaluation that if we had a</p> <p>8 variable -- let's just assume that -- that</p> <p>9 beef, chicken index entered this model as a</p> <p>10 negative consistently. That would -- that</p> <p>11 would suggest to me that I might not be</p> <p>12 measuring the beef, chicken index correctly.</p> <p>13 But the fact that it enters</p> <p>14 positively and statistically significant in</p> <p>15 this general equation gives me confidence</p> <p>16 that, you know, it's the right variable --</p> <p>17 it's a good variable to use.</p> <p>18 And that for a separate cut it</p> <p>19 might change signs does not -- does not cause</p> <p>20 me to lose any faith at all in those kind of</p> <p>21 tire-kicking exercises to make sure that</p> <p>22 no -- no cut was immunized from the</p> <p>23 challenged conduct.</p> <p>24 Q. While we are talking about how to</p> <p>25 evaluate econometric models, I note that you</p>	<p>1 A. Positive.</p> <p>2 Q. And why is that?</p> <p>3 A. Well, these costs eventually have</p> <p>4 to be recovered in the price in the relevant</p> <p>5 market. So to the extent these hog costs go,</p> <p>6 it's going to put upward pressure on the</p> <p>7 prices in the relevant market.</p> <p>8 Q. And would it undermine your</p> <p>9 confidence and the reliability of your model</p> <p>10 if it coefficient for hog cost is negative</p> <p>11 and not statistically significant?</p> <p>12 A. In one of these special cuts, no</p> <p>13 pun intended, to test whether any defendant</p> <p>14 or cut escaped impact, no.</p> <p>15 Q. Why not?</p> <p>16 A. Because these -- these are being</p> <p>17 designed for different purpose. I mean,</p> <p>18 Table 12 is the model that I'm offering.</p> <p>19 These other -- these other models are tests</p> <p>20 to see whether defendants somehow can't be</p> <p>21 shown to have inflated prices or a particular</p> <p>22 cut can't be shown to have -- to have</p> <p>23 experienced a price increase.</p> <p>24 It's -- when you do selective</p> <p>25 slices of the data this way, it's not that</p>

<p style="text-align: right;">Page 273</p> <p>1 surprising that the sign on a control 2 variable and one of the specifications may 3 flip unexpectedly. 4 Q. And what's your expected sign for 5 the COVID control? 6 You know, I should help -- help 7 orient you. You can look at Paragraph 156. 8 A. Okay. So there's a -- there's a 9 supply story that could be told for COVID, 10 which is that to the extent that COVID 11 creates dislocations in supply because, for 12 example, it's hard to staff processing plants 13 because people are getting sick, that could 14 be associated with the increase of prices. 15 Q. So would you expect the sign on 16 that COVID variable to be positive? 17 A. Yes, I would, and it is in 18 Table 12. It's positive. 19 Q. And expected to be statistically 20 significant? 21 A. And it is always in Table 12. 22 Q. And would it -- does it cause you 23 any trouble if some of the cuts -- specific 24 cuts like the rib cut for overcharge 25 regression for the COVID coefficient is</p>	<p style="text-align: right;">Page 275</p> <p>1 similar tests. 2 BY MR. COLEMAN: 3 Q. Did you view it as important to 4 run separate overcharge models by primal cut? 5 A. Yeah, I did think it was 6 important. I wanted to -- to run to ground 7 the possibility that a certain type of primal 8 cut escaped impact, and I found the opposite, 9 that all of these cuts had prices that were 10 inflated that were trivial to the challenged 11 conduct. 12 Q. And what sensitivities did you run 13 outside of the four main models? 14 A. You mean, the five different 15 subgroups in Table 23? 16 Q. Yeah. 17 A. So I did -- I did one by 18 defendant. I did defendant-specific models 19 as well. 20 Q. Why was it important for you to do 21 that, in your mind? 22 A. I think that we just want to -- we 23 just want to make sure that no defendant was 24 deviating from the pricing patterns that we 25 observed for the rest of the defendants.</p>
<p style="text-align: right;">Page 274</p> <p>1 negative? 2 A. No. 3 Q. And why not? 4 A. Because anything can happen when 5 you go into these selective cuts. I mean, 6 you're losing a bunch of observations, and, 7 you know, COVID may have affected these -- 8 these products different than others. 9 Q. There's a lot of factors that 10 impact the price of any given primal, right? 11 MR. RISSMAN: Object to form. 12 A. I think that in the -- in the 13 models that you have seen, kind of the 14 sensitivity models that you're referring to 15 towards the end of the report, I allowed for 16 the coefficients on all the parameters to 17 vary for each cut and for each defendant. 18 And, again, if you were inclined 19 not to allow them to vary, there's a very 20 straightforward econometric technique to 21 constrain all the parameters to be the same 22 across the cuts and across the defendants and 23 just to, what we call interact the conduct 24 variable with defendant dummies or with cut 25 dummies, and we could -- we could perform</p>	<p style="text-align: right;">Page 276</p> <p>1 Q. And did you run separate 2 overcharge models by direct purchaser type? 3 A. I did not. 4 Q. Why not? 5 A. I don't think there's good either 6 economic basis for doing it or econometric 7 basis for doing it. You know, you could -- 8 you're going to lose so much efficiency and 9 explanatory power by shrinking the data sets, 10 just that of one direct, depending on which 11 direct we are looking at. 12 There's really no economic theory 13 that would suggest why one direct purchaser 14 was somehow immunized from the harm that came 15 from the challenged conduct. Just there's 16 a -- there's a lot of reasons that that's not 17 what you do. And then I'm referencing the 18 reference manual and other econometric 19 textbooks, and none of them would -- would 20 suggest running separate regressions by 21 customer. It's just not done. 22 Q. And did you say -- did you say 23 direct purchaser type or by direct purchaser? 24 A. I said direct purchaser type. And 25 what I mean by that is, you understand</p>

<p style="text-align: right;">Page 277</p> <p>1 there's a difference between a large grocery 2 retailer that buys direct versus a food 3 service distributor versus a wholesaler or 4 broker.</p> <p>5 Q. We could come up with different 6 categories of direct purchasers, right?</p> <p>7 A. Right. And I'm sorry. I 8 interpreted your question to mean individual 9 direct purchasers. Do you want me to. Can 10 I -- I think we were talking past each other.</p> <p>11 Q. Yeah. You can clarify the record.</p> <p>12 A. Okay. So I did in Table 25 run 13 separate models for each subgroup of direct 14 purchaser type. I interpreted your question 15 to mean would I run a separate regression for 16 a given direct purchaser, and the answer is 17 no.</p> <p>18 Q. And why did you do that?</p> <p>19 A. So why did I present Table 25?</p> <p>20 Q. Yes.</p> <p>21 A. Yeah. So for 25, I wanted to make 22 sure that there was no large grouping of 23 direct purchasers, you know, by type that 24 somehow escaped antitrust impacts.</p> <p>25 Q. Did you run an overcharge model</p>	<p style="text-align: right;">Page 279</p> <p>1 and same patterns.</p> <p>2 Q. And did you run a model without 3 the -- what you described as the lingering 4 effects period, I believe 156?</p> <p>5 A. I did do one sensitivity in which 6 I dropped the post -- the after period, if 7 that's what you're asking about.</p> <p>8 Q. Yes.</p> <p>9 A. Yes, I did.</p> <p>10 Q. And explain why you did that.</p> <p>11 A. I wanted to make sure that -- to 12 the extent that the inclusion of the after 13 period was driving the conduct coefficient, I 14 wanted to make sure it wasn't. So the 15 simplest way to do that was just to remove 16 those data.</p> <p>17 And I found, sure enough, that the 18 effect is still positive and statistically 19 significant, albeit different, but it is 20 still positive and statistically significant.</p> <p>21 Q. So if we go to Paragraph 158.</p> <p>22 A. Okay.</p> <p>23 Q. It says in Model 2, Table 12, 24 Column 2, you used a processor-product fixed 25 effects to hold constant individual product</p>
<p style="text-align: right;">Page 278</p> <p>1 based on USDA prices?</p> <p>2 A. I did.</p> <p>3 Q. And I think I refer you to 4 Table 14.</p> <p>5 A. Do you mind telling me the page?</p> <p>6 Q. Oh, sorry. I want to say 164 --</p> <p>7 Paragraph 164.</p> <p>8 A. Okay.</p> <p>9 Q. So coming back to the -- the 10 question was just whether you ran an 11 overcharged model using USDA prices?</p> <p>12 A. And the answer is yes.</p> <p>13 Q. And can you explain why you did 14 that?</p> <p>15 A. It was another sensitivity test. 16 We just wanted to make sure that the patterns 17 that we were detecting and the correlations 18 we were detecting in the defendant data would 19 also be seen in the USDA data.</p> <p>20 Now, the reason why we could do 21 this is because the defendants represent 22 something on the order of 80 percent of the 23 marketplace, and so that gave me confidence 24 that we can look at USDA prices -- wholesale 25 prices writ large to study the same effects</p>	<p style="text-align: right;">Page 280</p> <p>1 from each defendant. In Model 3, you used a 2 processor-product, customer-type fixed 3 effects, which additionally holds the 4 constant the type of direct purchaser.</p> <p>5 A. Yes.</p> <p>6 Q. Do you see that?</p> <p>7 A. Yes.</p> <p>8 Q. Can you explain what a 9 processor-product fixed effect is?</p> <p>10 A. Sure. So now we are giving more 11 information to the model, right. Now we are 12 telling the model, when you're looking at the 13 given transaction, I want you to allow for 14 the fact that if it comes from a particular 15 processor and it covers a particular cut, 16 that that could explain why the price is what 17 it is, whereas in the prior model before you 18 put these fixed effects in, the computer 19 doesn't know that information.</p> <p>20 Q. And did you include processor and 21 product fixed effects?</p> <p>22 A. The combination. So -- so for the 23 same product type, you know, you get two 24 different dummies depending upon who the 25 processor was.</p>

1 Q. And did you also include customer 2 ID fixed effects? 3 A. Yes. 4 Q. And why did you do that? 5 A. Because it's possible that a 6 certain customer, that is, a certain direct 7 purchaser in the data has a special effect on 8 pricing. We want to be able to control for 9 that if it happens. 10 Q. And what's on a customer side, 11 looking at the defendant's side, why is it 12 important to account for the particular 13 defendant? 14 A. Well, we do. In that -- in that 15 fixed effect, it's the combination of the 16 processor product and customer ID that gets 17 its own dummy verdict. So we're controlling 18 for both sides of the transaction, the seller 19 and the buyer, as well as the cut involved. 20 Q. And that reflects the reality that 21 different defendants may have different 22 variations of the product or different brands 23 that could command different prices, right? 24 A. Correct. But you asked me about 25 this last one that brought in the customer	Page 281  1 up. We talked about exports, and I think you 2 showed me another series that looked fairly 3 linear over time, and anything -- anything 4 that is unfolding in a linear fashion could 5 be picked up in the time travel. 6 Q. So you mentioned technological or 7 efficiency increases. Anything specific 8 along those lines come to mind? 9 It's not a test. If you know, you 10 know. If you don't -- 11 A. We talked earlier today about 12 efficiency in terms of -- you know, I think 13 we talked about the ability to produce more 14 piglets, you know, given a certain -- certain 15 number of inputs. And so if there's a 16 technological innovation that is unfolding in 17 a linear fashion such as that, you know, it 18 could be -- it could be captured in the time 19 trend. 20 Q. And why wouldn't those kinds of 21 technological or efficiency trends be 22 captured by the plant cost variable? 23 A. Oh, they very well may be. So we 24 just want to make sure that to the extent any 25 of our other control variables are not
Page 282  1 ID, and you left out -- and the question, 2 just to be -- just to be complete is that 3 it's conceivable that a given customer is 4 able to push back on price increases because 5 of countervailing power, and to the extent 6 that that happens, you know, we want to be 7 able to control for that. 8 Q. Yeah. You want to control for 9 both sides of the equation, the defendant on 10 the one hand or the customer -- the defendant 11 or, slash, supplier on the one hand and 12 customer on the other? 13 A. Correct. 14 Q. In Paragraph 155 -- so apologies 15 for bouncing around, but that's where we are 16 at now -- you note that you added a linear 17 time trend to control for any general changes 18 that occurred over time such as technological 19 or efficiency increases, which may also have 20 had an effect on pork prices. 21 Can you explain why you did that? 22 A. Yeah. This is fairly standard. 23 It's just any secular trend that's unfolding 24 in a linear fashion could have an effect in 25 prices, and the time trend would pick that	Page 282  Page 284  1 capturing things that shift the supply or 2 demand curve around and that are correlated 3 with time, we are going to pick it up in the 4 time trend. 5 Q. So bouncing back up to the fixed 6 effects. I meant to ask you about why the 7 product fixed effect is important, or why you 8 did it. 9 A. Yeah. 10 Q. Can you explain? 11 A. Yeah. Because knowing -- telling 12 the computer the nature of the product could 13 be highly helpful in predicting what the 14 price was for the transaction that you're 15 looking at. 16 Q. And why is that? 17 A. Because different products 18 could -- could command different premiums 19 based on what's being sold. You know, I -- 20 you go to a restaurant, you will see pork 21 chops as being a high-end cut that's served, 22 you know, in a menu alongside steaks, and 23 it's conceivable that as a result, the loin 24 or different cuts that contain the meat of a 25 pork chop realize premium in the relevant

<p>1 market.</p> <p>2 Q. I think we also mentioned brand or 3 label or that kind of thing is -- packaging 4 product enhancements as -- and other things 5 that might affect the product, right?</p> <p>6 A. It's possible that -- that the 7 processor ID could affect pricing. My 8 opinion is, you know, that these products are 9 largely homogeneous, but bringing the 10 processor ID at least allows for the 11 possibility that the processor commands some 12 kind of premium or discount relative to 13 average prices.</p> <p>14 Q. So when you control for hog costs, 15 that's -- we had some questions and answers 16 about that this morning. I think we 17 ascertained that you control for hog costs by 18 using a data series provided by Iowa State 19 University; is that right?</p> <p>20 A. Correct.</p> <p>21 Q. And I could direct you to 22 Paragraph 153, if that's helpful.</p> <p>23 A. Yes.</p> <p>24 Q. But I'm specifically interested in 25 what -- what you know about what costs are</p>	<p>Page 285</p> <p>1 productivity or corn prices or soybean 2 prices, et cetera, in generating that data 3 set?</p> <p>4 A. No, I don't -- I don't know of the 5 assumptions, but certainly productivity 6 would -- could influence these costs. So I 7 would hope that those sorts of productivity 8 changes would already be impounded in this 9 price that we are looking at.</p> <p>10 Q. Coming back to your model and how 11 you tested for impact and a comparative 12 impact.</p> <p>13 Did you always subtract the same 14 overcharge percentage from the predicted 15 price to arrive at the but-for price?</p> <p>16 A. No. No. So to get the but-for 17 price during the conduct period, I take all 18 the right-hand side variables in the model, 19 all right, and I use those values for that 20 transaction, and I predict using all of the 21 coefficients in the model, not just the -- 22 not just the conduct parameter, but I use all 23 of the coefficients to make a prediction of 24 what the price would have been in the absence 25 of the challenged conduct, and then I</p>
<p>1 captured by that variable.</p> <p>2 A. So there's a description of my 3 understanding of what's going into the 4 variable, and it's right in the middle of 5 153, and it says: The change in cost of 6 animal feed composed of ingredients such as 7 the cost of corn and soybean meal as well as 8 nonfeed costs across time for a rank-and-file 9 Iowa producer.</p> <p>10 Q. And do you know -- do you know 11 what the percentage of costs for raising a 12 hog is attributable to feed?</p> <p>13 A. No, no.</p> <p>14 Q. Do you know whether that cost 15 includes labor?</p> <p>16 A. The sentence above suggests that 17 it is, and I would have to -- it's just been 18 too long since I went back through this. But 19 it says here that the average cost of 20 producing a 270-pound finished pig. And so I 21 think labor could enter in as the nonfeed 22 cost, but I would just want to go back and 23 check that out.</p> <p>24 Q. Do you know whether Iowa State 25 makes any assumptions regarding sow</p>	<p>Page 286</p> <p>1 subtract what the actual price was. 2 And it's that difference between 3 the predicted conditional on all of the 4 attributes and all of the parameters in the 5 model minus the actual. So I am not just 6 moving everything up by -- bu the conduct 7 parameter.</p> <p>8 Q. So you -- you do have a 9 calculation of a predicted competitive price, 10 right?</p> <p>11 A. For each transaction, I can 12 predict what the price would have been in the 13 but-for world given the parameters that I've 14 estimated in the model and given all of the 15 right-hand side variables of that particular transaction.</p> <p>17 Q. Is it always the same percentage 18 across transactions?</p> <p>19 A. No. You mean, percentage 20 inflation? No. In fact, you can tell by the 21 99-point-something percentage, there's going 22 to be some transactions that appear to have 23 escaped injury. So if what you were saying 24 were true, and everything just automatically 25 moves by the same percentage, my test would</p>

<p style="text-align: right;">Page 289</p> <p>1 present a hundred percent impact, and it does 2 not. 3 Q. Is it true that the percent 4 difference between the predicted price and 5 your predicted competitive price is always 6 12.8 percent? 7 A. Well, I don't -- I don't perform 8 that. I take the predicted price in the 9 but-for world, which I would call the -- is 10 the competitive price, and I compare it to 11 the actual price. And that difference is not 12 always 12.4 percent. 13 On average, it's 12.4 percent, but 14 it's not always 12.4 percent. And, in fact, 15 just to repeat this point, sometimes the 16 prediction comes in above the actual price in 17 which that transaction by this test would 18 appear to have escaped injury, and that 19 happens in fewer than, you know, 1 percent of 20 the transactions, but it does happen. 21 Q. I'm interested in -- I mean, you 22 are aware that defendants produced data on a 23 wide variety of pork products in this case. 24 Some you even included in your analysis, and 25 some you didn't, right?</p>	<p style="text-align: right;">Page 291</p> <p>1 aggregate damages associated with the class 2 product. So if I were to include products in 3 there that were not in the class, I would be 4 overstating damages. 5 Q. In your pass-through analysis -- 6 and just for point of reference, I could 7 direct you to Paragraph 181. 8 A. Give me one second. 9 Q. Yep. 10 A. Okay. 11 Q. Did you account for the -- for 12 seasonality? 13 A. Well, I know I accounted for 14 seasonality in the -- in the overcharge 15 regression to directs, but let me see if I 16 got the control -- the capture seasonality in 17 the pass-through. 18 So I'm not seeing it here. My 19 recollection is that we have already 20 accounted for seasonality in Stage 1, which 21 was to get to the overcharge to the directs. 22 But we -- I don't think we account for 23 seasonality in the pass-through regressions. 24 That would be something that would be fairly 25 trivial to do, and would also be common to</p>
<p style="text-align: right;">Page 290</p> <p>1 A. Right. I eliminated anything that 2 did not meet the class definition before 3 running the test. 4 Q. And how did you come up with that 5 class definition? 6 A. It was given to me by counsel. 7 Q. So do you have any economic 8 analysis to determine what was -- what 9 products should be in or out of the class 10 products? 11 A. I'm not -- no one asked me what 12 should be in or out of the class. That's up 13 to the plaintiffs. What I -- I do an 14 analysis of what should be in or out of 15 product market. And in my opinion, the 16 product market is larger than the class 17 products, but you would have to ask counsel 18 as to why they eliminated certain products 19 from the class. That was not my decision. 20 Q. But in any case, it was your 21 intention to limit your analysis to the 22 products at issue in the class? 23 A. I mean, I have to. I understand 24 that's my instructions. My assignment is to 25 estimate -- to show impact and to estimate</p>	<p style="text-align: right;">Page 292</p> <p>1 the class. 2 Q. Do you account for the cut or type 3 of pork? 4 A. We are accounting for -- and to 5 the extent we are matching up the wholesale 6 and the retail price of the same cut, that 7 is, we are not mixing apples with oranges. 8 You know, we are taking the price paid by the 9 distributor, for example, and comparing it to 10 the price -- let's see how we do this -- paid 11 for the same cut, that is, what the 12 distributor paid for and sold the same cut, 13 right. 14 So in that sense, we are 15 controlling for the cut. We are not mixing 16 apples and oranges. But if you're asking do 17 we allow for a different pass-through by cut, 18 I think the answer is no. 19 Q. And does your price measure price 20 per pound or price per unit? 21 A. I think it's units, but it's 22 something I want to go back and check. I 23 think we are doing it in units. 24 Q. Do you have an answer, or are you 25 still looking?</p>

1 A. Oh. Sorry. I was done. 2 Q. I was thinking you were confirming 3 whether you -- 4 A. No. As I'm thinking about it, I 5 don't think that it would affect -- that it 6 would have any effect on the pass-through 7 rates as long as we are doing apples to 8 apples. So you'd get the same pass-through 9 rate if you were doing -- you know, it's a 10 cut versus a cut. 11 And I can go during a break and 12 check if it's units or pounds, but I don't 13 see why that would make a difference. 14 Q. Well, if it's price per unit, the 15 products -- pork products can come in 16 different size packages, right? 17 A. Right. And so, you know, I know 18 that one of the challenges here was making 19 sure that we got comparable units on the buy 20 side and on the sell side for given a direct 21 purchaser. And we think that when you see 22 very skewed ratios of prices of cost that 23 would suggest that you have a mismatch on the 24 unit. 25 So I'm fairly confident -- I can	Page 293  1 pork? 2 A. Sitting here, I don't think so, 3 but that's something I can check as to what 4 controls, if any, were -- were included on 5 the right-hand side of these regressions. I 6 just performed these too long ago, but I 7 can't tell you which -- which controls are 8 included right now. 9 Q. And how many pass-through rates 10 did you estimate for each intermediary 11 seller? 12 A. One. 13 So when you say "intermediary 14 seller," you can look at Table 21. I've got 15 a pass-through rate for 7-Eleven, Aldi, 16 Amazon Fresh, and it goes down, and then I do 17 the same thing for the distributors. 18 Q. So did you allow the pass-through 19 rate to vary over time? 20 A. No. I just estimated one 21 pass-through rate across the data set. 22 Q. Do you allow the pass-through rate 23 to vary by cut or by defendant? 24 A. Still no. I mean, I think I told 25 you that I didn't do it by defendant earlier.
Page 294  1 go back and check with the researcher -- that 2 we did do this in units. 3 Q. Does brand matter to the 4 pass-through analysis? 5 A. Brand of the retailer? 6 Q. Of the product being sold. 7 A. No, I don't think it would. These 8 are largely homogenous. You could -- if you 9 were so inclined, you could estimate separate 10 pass-through rates by -- you're saying for -- 11 based on the source of the product, or you 12 could -- you could control for the source. 13 But that's not, you know, what we did. 14 We were looking at pass-through 15 from the perspective of the -- of the direct 16 purchaser. 17 Q. For example, did you indicate or 18 examine the possibility of differential 19 pass-through rates for branded versus 20 private-label products? 21 A. Oh, for a given retailer, we did 22 not. 23 Q. Did you account for any product 24 characteristics other than -- well, 25 seasonality we mentioned and the cut/type of	Page 294  Page 296  1 And by cut, I think that's still no. Same 2 answer. I didn't do separate pass-through 3 rates by cut. 4 Q. Did you evaluate any products sold 5 by nondefendant packers? 6 A. Let's see. Are you asking in my 7 pass-through analysis in particular or just 8 in general? 9 Q. Yes, yes. Sorry. In your 10 pass-through analysis. 11 A. I don't think so because we were 12 matching with defendants' data. But that's 13 something that I could -- you know, I could 14 run to ground. I think it was just for the 15 pass-through rate that could be matched with 16 defendants' data. 17 Q. Did you study whether retailers 18 could -- retailers' pass-through or cost 19 changes when they're running a promotion? 20 A. I allowed for -- I allowed for 21 promotions to be in the data, yes. 22 Q. Or whether retailers' pass-through 23 cost charges for all -- all brands? 24 A. Well, I don't provide separate 25 pass-throughs for these retail stores by

Page 297	Page 299
<p>1 brands. I've got one pass-through for the 2 retail.</p> <p>3 Q. So that same answer would hold 4 true for changes -- or differences at 5 different stores or regions or distribution 6 centers or that kind of thing?</p> <p>7 A. I mean, I think it's fair that 8 right now in Tables 21 and 22, that's just 9 one for the -- for the direct purchaser.</p> <p>10 Q. And it's your -- in terms of the 11 level of granularity, the model focuses on 12 intermediary, monthly level and at a product 13 level, right?</p> <p>14 A. Correct.</p> <p>15 MR. COLEMAN: Let's take a quick 16 break here. I'm not even sure how 17 long we have been going.</p> <p>18 THE VIDEOGRAPHER: The time is 19 4:43 p.m. We are off the record.</p> <p>20 (A brief recess was held from 21 4:43 p.m. to 4:56 p.m.)</p> <p>22 THE VIDEOGRAPHER: The time is 23 4:56 p.m. We are back on the record.</p> <p>24 BY MR. COLEMAN:</p> <p>25 Q. Dr. Singer, I understand you</p>	<p>1 lined up on a per-unit basis.</p> <p>2 Q. So what was it that you were 3 focused on to do that match -- the product 4 match?</p> <p>5 A. Was I focused on?</p> <p>6 Q. Yeah. How did you -- what was the 7 key criteria that matched products?</p> <p>8 A. We just wanted to make sure that 9 we were talking about the same product that 10 was being bought and sold because that's -- 11 you know, we wanted to trace what a cost 12 increase would be to a direct into its price 13 that it charged in retail.</p> <p>14 Q. Okay. Got it. Yeah, yeah, yeah.</p> <p>15 A. So many times, you had asked me if 16 we did the match. The answer is that in many 17 times, the third party, either distributor or 18 retailer did the match for us. And other 19 times, we had to do the match. But what -- 20 what invariably was taking place was matching 21 along SKU.</p> <p>22 So the SKU would be the -- what 23 would identify in the database, the 24 particular cut that was purchased and turned 25 around and resold by -- by the direct.</p>
<p style="text-align: center;">Page 298</p> <p>1 wanted to clarify some previous testimony.</p> <p>2 A. There's just two things where I 3 think I either got tired or misstated it. 4 Let me just clear it up.</p> <p>5 On Paragraph 181, I talk about the 6 controls that went into the pass-through 7 model, and you will see that I controlled for 8 product category and by months, seasonality. 9 So that's in Paragraph 181, and you had asked 10 me earlier what controls went into the 11 pass-through regression. I told you I didn't 12 know. I just couldn't do it by memory.</p> <p>13 And the second thing that I wanted 14 to clear up, is you asked me about how the 15 matching was done, and the matching -- I said 16 it was -- I thought it was per unit. I think 17 it was both, per unit and per pound, and the 18 reason why it happened this way is that in 19 many occasions, we -- the direct purchaser 20 did the matching for us, and it was typically 21 matching on SKU, and so I think the best way 22 to answer your prior question was not by 23 pound or by unit, but instead by SKU, and 24 that resulted in some matches being lined up 25 on a per-pound basis and other matches being</p>	<p style="text-align: center;">Page 300</p> <p>1 Q. Okay. Anything else?</p> <p>2 A. That's it.</p> <p>3 Q. Turning back to Agri Stats. I 4 believe your testimony is that Agri Stats was 5 central to the conspiracy that you understood 6 to have existed between 2009 and 2018, right?</p> <p>7 A. Central to the plaintiff's theory 8 of harm or alleged period of the challenged 9 conduct. That's correct.</p> <p>10 Q. In a -- in Paragraph 136 of your 11 report, for example, you say that collection 12 and the dissemination of competitively 13 sensitive information is the day-to-day work 14 of a cartel, right?</p> <p>15 A. Yes.</p> <p>16 Q. And you cite quite a bit of 17 literature on cartel conduct. And I gather 18 that participants in a cartel, one of the key 19 things they need to do is monitor compliance 20 with a cartel agreement; is that right?</p> <p>21 A. Correct.</p> <p>22 Q. And your -- your opinion is that 23 Agri Stats was consistent with that 24 monitoring mechanism that a cartel needs for 25 stability over time, right?</p>

Page 301	Page 303
<p>1 A. Correct.</p> <p>2 Q. And one of the problems that</p> <p>3 cartels have is the constant incentive for</p> <p>4 individual members of the cartel to cheat on</p> <p>5 the agreement, right?</p> <p>6 A. Yes.</p> <p>7 Q. And the monitoring mechanism</p> <p>8 allows other participants in the cartel to</p> <p>9 see the cheating and pursue enforcement,</p> <p>10 right?</p> <p>11 A. Correct.</p> <p>12 Q. And so the key thing that</p> <p>13 monitoring allows for a cartel is to give</p> <p>14 participants visibility into what each</p> <p>15 individual firm is doing, whether they're</p> <p>16 complying with the cartel, and then setting</p> <p>17 the stage for enforcement of the cartel</p> <p>18 agreement, right?</p> <p>19 A. Right.</p> <p>20 Q. And to have that kind of -- to</p> <p>21 function as that kind of monitoring</p> <p>22 mechanism, the participants in the cartel</p> <p>23 need to monitor the individual firm</p> <p>24 activities of cartel members, right?</p> <p>25 A. Correct.</p>	<p>1 BY MR. COLEMAN:</p> <p>2 Q. Right. So that the reason</p> <p>3 monitoring is helpful is keep cartel members</p> <p>4 in line and make sure the agreement is</p> <p>5 stable, right?</p> <p>6 A. Yes.</p> <p>7 Q. And is it your opinion that there</p> <p>8 are -- that none of cartel members from the</p> <p>9 2009 to 2018 period deviated from the cartel</p> <p>10 agreement that is alleged to have existed?</p> <p>11 A. No. That's not my opinion. I</p> <p>12 just -- I think that would give us insight</p> <p>13 into what the enforcement would look like,</p> <p>14 and I'm just not aware of a particular</p> <p>15 episode happening.</p> <p>16 Q. How would we identify an example</p> <p>17 of deviation from the purported cartel</p> <p>18 agreement?</p> <p>19 A. Well, I mean, I think the -- you</p> <p>20 could -- I'm just -- you know, I'm giving you</p> <p>21 a hypothetical, but you could see in a report</p> <p>22 that one participant is coming in</p> <p>23 consistently below each of its rivals. And</p> <p>24 then another participant questioning why</p> <p>25 they're going along, and then the punishment</p>
Page 302	Page 304
<p>1 Q. So one thing that I am not seeing</p> <p>2 in the documents that you have cited is any</p> <p>3 enforcement mechanism through Agri Stats or</p> <p>4 otherwise.</p> <p>5 What do you have in mind as an</p> <p>6 example of the alleged pork cartel's efforts</p> <p>7 to enforce the agreement that you think</p> <p>8 existed?</p> <p>9 MR. RISSMAN: Object to form.</p> <p>10 A. So enforcement, of course, is only</p> <p>11 needed when someone deviates, and so I'm</p> <p>12 not -- I'm not aware of episodes on which</p> <p>13 someone deviated and -- and undercut their</p> <p>14 rival's prices. In fact, what we observed in</p> <p>15 the record evidence is that Agri Stats was</p> <p>16 alerting defendants of opportunities to</p> <p>17 increase the price. And that was generally</p> <p>18 followed from what I -- what I observed.</p> <p>19 But I -- you know, one of the</p> <p>20 prongs that we are trying to -- to evaluate</p> <p>21 is not enforcement per se but monitoring, and</p> <p>22 monitoring was -- was the prong that I looked</p> <p>23 at, and I think that there is pretty good</p> <p>24 evidence that monitoring, in fact, was made</p> <p>25 possible by -- by Agri Stats.</p>	<p>1 could take one of two forms.</p> <p>2 It could be we kick you out of the</p> <p>3 cartel, or we would retaliate by dropping our</p> <p>4 own prices. That would be kind of evidence</p> <p>5 of enforcement that we would look for.</p> <p>6 Q. And that kind of evidence is</p> <p>7 something that we don't have here, at least</p> <p>8 not in your report, right?</p> <p>9 A. It's not -- I do not think it's in</p> <p>10 my report. The enforcement when someone</p> <p>11 deviated, just sitting here, I can't -- I</p> <p>12 can't think of episodes that I came across.</p> <p>13 Q. And I also don't see any documents</p> <p>14 cited in your report in which Agri Stats</p> <p>15 appears to have any recognition that it's</p> <p>16 facilitating a cartel?</p> <p>17 MR. RISSMAN: Object to form.</p> <p>18 A. I don't think I would agree with</p> <p>19 that characterization. I think that</p> <p>20 Agri Stats recognized that it was creating</p> <p>21 profit making and price increases that</p> <p>22 wouldn't have otherwise been available</p> <p>23 without the information, and use that as part</p> <p>24 of its marketing to induce outsiders to join</p> <p>25 the club.</p>

1 BY MR. COLEMAN: 2 Q. Are you aware of any documents in 3 the case in which Agri Stats refers to an 4 agreement among the defendants to coordinate 5 prices or output? 6 A. Well, you know, I imagine that 7 Agri Stats wouldn't do something that was so 8 blatant and obvious to send up, you know, 9 alarm bells like that. I -- I just came off 10 of a price-fixing case on capacitors. No one 11 ever wrote down, like, let's perpetuate the 12 price-fixing agreement. It's just things 13 they know not to do. 14 In that case, they swapped around 15 at these monthly meetings Excel spreadsheets 16 that everybody would fill out of their 17 current and future prices. 18 So I'm not sure that you're going 19 to find such explosive and incriminating 20 language in a communication because people 21 know from their antitrust counsel that they 22 couldn't be saying things like that. 23 Q. So Agri Stats did the, 24 quote/unquote, day-to-day work of a cartel 25 for nine years in the period, and yet you're	Page 305  1 then boost their price. Is that how that 2 operates? 3 A. The average is important, but of 4 course they were getting a lot of more than 5 the average here. They were getting 6 precisely where they sat on the distribution, 7 and so knowing that the granular level down 8 to the plant level and knowing where you were 9 on that distribution would give a participant 10 much more confidence in -- in raising prices 11 than if they only knew where they were with 12 respect to the average. 13 Q. I want to make sure I understand. 14 By "distribution," do you mean their ranking 15 in the Agri Stats report on -- 16 A. Correct. 17 Q. So in your mind, the key things 18 the Agri Stats report provided was, first, 19 you get an average price by various products, 20 and then you get the defendants -- each 21 defendants knows its position with respect to 22 not only the average price but its overall 23 kind of ranking in the industry; is that 24 right? 25 A. Not just in the industry. I mean,
Page 306  1 not aware of any instance in which it was 2 referring to an agreement among defendants? 3 MR. RISSMAN: Object to form. 4 Mischaracterizes his testimony. 5 A. Yeah. As an economist, you know, 6 I -- I'm not looking for, you know, an 7 agreement per se. I'm looking for conduct 8 that would facilitate collusive outcomes. 9 I'm looking at this through the lens of an 10 economist. The economist doesn't use the 11 word "agreement" when we're assessing 12 anticompetitive effects. 13 I want to know could -- could the 14 price hikes that were made possible through 15 the information-sharing regime, could those 16 have been achieved absent the information 17 sharing, and I think it would have been very, 18 very hard to do that, and that's why I think 19 that the information sharing effectuated 20 anticompetitive effects. 21 BY MR. COLEMAN: 22 Q. And one of your opinions is that 23 even average prices can have the effect of 24 pulling up prices over time as lower priced 25 members of the cartel see the average and	Page 308  1 ranking down to very, very granular product 2 levels. Right? The Agri Stats reports 3 aren't just giving, you know, industry-level 4 price. 5 They are giving things down to the 6 cut and done to the plant, and so, you know, 7 I would submit that if someone wants to come 8 in below average but he finds out that he's 9 at the very bottom, and he can move up, you 10 know, that's a great opportunity to take a 11 price increase that may not be available 12 absent the information-sharing exchange. 13 Q. USDA publishes reports showing the 14 average price by primal in -- on an ongoing 15 realtime basis in the marketplace, right? 16 A. Well, it's at an aggregated level, 17 so my understanding is that they're not 18 breaking it out by processor, and they are 19 not breaking it out by plant. And when you 20 say "realtime," I'm sure it comes with a lag, 21 and -- and I -- just leave it at that. 22 Q. Do you know whether USDA prices 23 are more current than Agri Stats' prices that 24 are distributed to the defendants? 25 A. I don't know. I don't know for a

1 fact which one is more -- more current. 2 Q. But in any case, the in terms of 3 monitoring and enforcement, the ability to 4 de-anonymize the data, identify who is who is 5 important to the role that Agri Stats played 6 in the purported cartel, right? 7 A. Yes, and would not be available if 8 all you had, say, was the USDA aggregated 9 data. You wouldn't be able to punish, for 10 example, or identify who was cheating on the 11 cartel. 12 Q. Right. And -- yeah. And the 13 difference between Agri Stats and USDA, among 14 others, one thing is you have the opinion 15 that defendants were able to de-anonymize the 16 participants in Agri Stats' reports, right? 17 A. Yes. 18 Q. Did you make any effort to 19 de-anonymize any of the reports to identify 20 who was who in any given report? 21 A. No. I don't think that I, as a 22 third party, would have that capability, but 23 I was convinced that the participants could 24 and, in fact, asked Agri Stats for assistance 25 when they couldn't.	Page 309  1 A. I would have to go into my 2 de-anonymization section and see if there 3 were attempts, successful or unsuccessful, by 4 Hormel. But sitting here, at this late hour, 5 I can't tell you if Hormel was in that 6 section of the report. 7 Q. Do you have any effort by Seaboard 8 to de-anonymize Agri Stats reports? 9 A. I mean, it's the same answer. I 10 would have to go into that section of my 11 report. 12 Q. Did you -- you know, given the 13 importance of de-anonymizing to your theory 14 of how Agri Stats functioned, did you make 15 any effort to check whether all defendants 16 attempted to de-anonymize Agri Stats' 17 reports? 18 A. I think I made some effort in that 19 direction. I mean, I put forward the 20 evidence that I thought was most consistent 21 with the claim. Whether or not I was able to 22 show it for all defendants is another 23 question. 24 I don't know if I did. But that 25 was certainly -- you know, we sought to get
Page 310  1 So I feel like that is sufficient. 2 Whether I could do it as an outsider just by 3 looking at a report, I think is irrelevant. 4 It's whether or not the participants could, 5 and I think I've shown a lot of evidence they 6 could. 7 Q. Any understanding as to the 8 mechanism of how the purported de-anonymizing 9 worked? 10 MR. RISSMAN: Objection. 11 Foundation. 12 A. I described the mechanism, but I 13 think that Agri Stats would provide a list of 14 the participants at the top and would give 15 details about the plant that tipped off the 16 other participants as to whose plant it was 17 and where it was. 18 In any event, they were able to 19 figure it out, and they boasted about being 20 able to figure it out. I will leave it at 21 that. 22 BY MR. COLEMAN: 23 Q. Any instance that you're aware of 24 where Hormel attempted to de-anonymize an 25 Agri Stats report?	Page 310  1 as much data on that question as we could. 2 Q. Do you have any information as to 3 whether Clemens ever attempted to 4 de-anonymize an Agri Stats report? 5 A. It would be the same answer; that 6 I would send you to that section of the 7 report to see if Clemens was there. I would 8 have to say that it would be surprising that 9 some could and some couldn't. 10 I think it would be more of an all 11 or nothing, and I also think that it's part 12 of the marketing to ensnare, you know, future 13 processors into the ring. You would -- it 14 would be weird for Agri Stats to deny that 15 sort of benefit for some members but not 16 others. 17 Q. Yeah. And why would that be 18 surprising if there were some -- some members 19 of Agri Stats or subscribers of Agri Stats 20 that were not able or didn't de-anonymize? 21 A. Because I think that's the 22 fundamental value added that the Agri Stats 23 report is bringing. It's allowing you to 24 find price-making opportunities, price 25 increases that you wouldn't otherwise be able

<p style="text-align: right;">Page 313</p> <p>1 to find, and the firms needed confidence and 2 knowing, you know, who was where and where 3 they ranked. 4 And it just seems like you would 5 cut a lot of the value to a prospective 6 member if you denied them that -- that 7 luxury. 8 Q. And I assume that part of that 9 role that de-anonymizing would play would be 10 important for the de-anonymizing to be -- 11 well, as you described it, the participants 12 would need some confidence in the accuracy of 13 what they -- what they were doing and what 14 they were seeing, right? 15 A. I think that's fair. I think that 16 they have to -- they have to believe what 17 they're looking at is real data as opposed to 18 made-up data. 19 Q. Did you see any documents in which 20 Agri Stats was trying to ensure that the 21 participants could de-anonymize their 22 reports? 23 A. I recall efforts by certain 24 defendants complaining to Agri Stats that 25 they weren't able to do it as easily as they</p>	<p style="text-align: right;">Page 315</p> <p>1 doesn't have an opinion that's he 2 offering in this case. 3 A. Yeah. I mean, I can tell you when 4 the challenged conduct came into existence 5 for the complaint, which is in 2009, when 6 Agri Stats started producing these specific 7 reports. 8 And then I think you had a 9 two-part question for me. I can't remember 10 what the other -- 11 BY MR. COLEMAN: 12 Q. Yeah. I'm actually not interested 13 in your opinion as much as just what evidence 14 you have seen or reviewed, included in your 15 report that -- of the formative meeting of 16 the cartel members to engage in, 17 quote/unquote, challenged conduct? 18 MR. RISSMAN: Object to form. 19 A. I think I detailed some industry 20 meetings or association meetings that would 21 have allowed these participants to interact 22 in person, and I've also, I think, documented 23 direct communications. I will leave it at 24 that. 25</p>
<p style="text-align: right;">Page 314</p> <p>1 should and asking for further information. 2 Q. Yeah. And how did Agri Stats 3 respond from what you can recollect? 4 A. I don't know if I -- I don't know 5 if I -- in each of those occasions, I don't 6 know if I showed what Agri Stats response 7 was. I only showed the overtire by the 8 member. 9 Q. But it would be your expectation, 10 given the role that Agri Stats was playing, 11 that it would facilitate de-anonymizing, if 12 requested by the members; is that right? 13 A. I think that's fair. 14 MR. RISSMAN: Form. 15 BY MR. COLEMAN: 16 Q. Are you aware of any evidence of a 17 formative meeting for what we'll call the 18 Agri Stats pork cartel? 19 A. A formative meeting? 20 Q. Right. When did this cartel come 21 into existence? 22 MR. RISSMAN: Objection. It 23 calls for a legal conclusion, and I 24 will instruct the witness to not 25 answer and to the extent that he</p>	<p style="text-align: right;">Page 316</p> <p>1 BY MR. COLEMAN: 2 Q. So there are mediums in which 3 they -- some of the defendants were -- 4 attended, so they had an opportunity to talk 5 to one another. That's your testimony? 6 A. Correct. 7 Q. Did you see any evidence that they 8 actually did and discussed an agreement to 9 engage in the challenged conduct? 10 A. I don't think I'm privy to what 11 was discussed at those -- at those meetings. 12 Q. Do you know whether there was any 13 indication of what the specific agreement was 14 as to whether there was an agreement to cut 15 pork supply by some amount or -- what were 16 the terms of the agreement, to the best that 17 you understand it? 18 MR. RISSMAN: Objection. Calls 19 for a legal conclusion and lacks 20 foundation. 21 A. I think you might be taking the 22 word "agreement" literally as if they drew up 23 written documents, and these are the 24 objections of the cartel, right. 25 That's not what's in my analysis.</p>

<p style="text-align: right;">Page 317</p> <p>1 What I'm trying to figure out is whether the      2 conduct using qualitative evidence according      3 to the economic criteria. My quantitative      4 evidence is consistent with the existence of      5 an agreement, but in the abstract, an      6 agreement that -- to raise prices and to      7 reduce domestic output.</p> <p>8 BY MR. COLEMAN:</p> <p>9 Q. So you have an opinion that      10 Agri Stats was used -- Agri Stats reports was      11 used to raise prices, right?</p> <p>12 A. Yes.</p> <p>13 Q. And do you have any opinion as to      14 whether there was any kind of specific      15 agreement on prices or not to compete based      16 on a specific price in Agri Stats or anything      17 along those lines?</p> <p>18 Just wanting to understand how you      19 think this mechanism worked?</p> <p>20 MR. RISSMAN: I'm going to      21 object to form.</p> <p>22 A. So the mechanism work, as I, you      23 know, spelled it out in my report, is that I      24 think -- I think it's best understood as      25 information exchange, where the information</p>	<p style="text-align: right;">Page 319</p> <p>1 undercut you.</p> <p>2 Q. Or a -- I think what you're      3 intending to say is an agreement to exchange      4 pricing information absent the agreement      5 would be dangerous; is that right?</p> <p>6 A. Well, I mean, something more      7 basic. That sharing of current prices or      8 capacity with rivals in a granular level can      9 facilitate anticompetitive outcomes. I think      10 that's a pretty basic proposition that most      11 economists subscribe to.</p> <p>12 Q. And do you have -- so I understand      13 that you engage in the economic analysis to      14 kind of quantify the effect of the exchange      15 of information on prices. I'm interested in      16 what understanding you have reached based on      17 your review of the record as to how that      18 mechanism actually worked in practice.      19 Can you provide any more detail      20 how Agri Stats reports were used by      21 individual defendants to coordinate on      22 prices?</p> <p>23 MR. RISSMAN: I'm going to      24 object to instruct the witness to only      25 answer as to opinions that he's</p>
<p style="text-align: right;">Page 318</p> <p>1 that was exchanged was competitively      2 sensitive. And that facilitated coordinated      3 decision making with respect to prices and      4 output.</p> <p>5 BY MR. COLEMAN:</p> <p>6 Q. Well, you know, defendant could      7 get the information -- I think you even      8 mentioned this, that perhaps in collusion,      9 defendants wouldn't want to exchange      10 information because they might undercut the      11 prices with knowledge of a defendant's      12 prices, right?</p> <p>13 A. Right. Absent -- absent collusion      14 that if I just volunteered to you that I'm      15 taking my plant capacity down, and we didn't      16 have a, quote/unquote, agreement in place,      17 then you could undercut me by increasing      18 output or stealing my clients or my      19 customers.</p> <p>20 Q. And the same thing on price,      21 right?</p> <p>22 A. Correct. So, yeah, committing to      23 raise prices in the absence of an agreement      24 is dangerous to the extent that it would      25 allow a rival who wasn't on the same page to</p>	<p style="text-align: right;">Page 320</p> <p>1 offered in this case.</p> <p>2 A. The opinion that I offered in the      3 case -- the analysis I offered shows how      4 defendants were able to exploit the      5 competitively sensitive information that I      6 have provided to identify price increases      7 that were safe to take.</p> <p>8 And my opinion is that in the      9 absence of that sharing mechanism, it would      10 have been much harder to exploit and to take      11 those -- even learn of those problem max --      12 maximizing profiting opportunities.</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. And did you -- and the -- the      15 Agri Stats sales reports would be the -- in      16 your mind, the key mechanism for that kind of      17 price coordination, right?</p> <p>18 MR. RISSMAN: Object to form.</p> <p>19 A. I think they were key, but I think      20 I go through and talk about how each of the      21 reports could have facilitated coordinated      22 pricing decisions and output decisions.</p> <p>23 BY MR. COLEMAN:</p> <p>24 Q. Are you aware of any individual      25 transaction that you can point to where a</p>

<p style="text-align: right;">Page 321</p> <p>1 defendant used an Agri Stats report as the 2 driver for the primary rationale for price 3 increase?</p> <p>4 MR. RISSMAN: Object to form.</p> <p>5 A. I don't know if we could go point 6 to a transaction, but we can definitely, and 7 we do, review episodes in which Agri Stats 8 identified a price-taking opportunity for a 9 participant, and the participant seizes and 10 exploits that information, and it's 11 conceivable we could go find out the affected 12 transactions.</p> <p>13 But as you know that my -- my 14 price regression doesn't look at the effects 15 on any particular transaction. It's looking 16 at the effect during the totality of the 17 conduct period, you know, in relation to this 18 clean benchmark period beforehand.</p> <p>19 BY MR. COLEMAN:</p> <p>20 Q. Yeah. So when I reviewed the 21 evidence that you cited, I see a lot of 22 Agri Stats presenting sales reports that 23 identify, quote/unquote, pricing 24 opportunities.</p> <p>25 So I see that, and I understand</p>	<p style="text-align: right;">Page 323</p> <p>1 were identified by Agri Stats for defendant 2 were seized upon.</p> <p>3 I mean, that was the whole purpose 4 of subscribing to the -- the report.</p> <p>5 Q. So certain defendants didn't 6 subscribe to Agri Stats sales reports for 7 long stretches of the conspiracy period, 8 right?</p> <p>9 A. I had a table that, I think, shows 10 little check marks for which report who took 11 and of when, but I'm going to admit again 12 that I don't have it memorized.</p> <p>13 Q. Why would it make sense for a 14 defendant not to subscribe to the Agri Stats 15 report if it's a member of the supposed 16 cartel?</p> <p>17 MR. RISSMAN: Object to form.</p> <p>18 Calls for speculation.</p> <p>19 A. Well, I would want to look at the 20 series, but it's conceivable that you would 21 have someone who just came late to the party. 22 They just came -- there's a few years during 23 the conduct period they weren't yet in, and 24 eventually show up subscribing.</p> <p>25</p>
<p style="text-align: right;">Page 322</p> <p>1 it's presented in your reports, and I see 2 some instances of executives that get the 3 reports and say, oh, yeah, we are not doing 4 well. We got to do better on our pricing, 5 you know, presumably raise the pricing.</p> <p>6 What I don't see is any instance 7 of an individual defendant making a pricing 8 decision actually based on that information. 9 Right?</p> <p>10 MR. RISSMAN: Object -- object 11 to form and just the narrative and 12 your characterization of the evidence.</p> <p>13 BY MR. COLEMAN:</p> <p>14 Q. Yeah. You can correct me if I'm 15 wrong, Dr. Singer.</p> <p>16 Where's the evidence of a 17 defendant taking the Agri Stats pricing 18 information and adjusting their bid or using 19 it in a bid or raising their price list or 20 anything like that?</p> <p>21 A. Well, I think I have a section 22 that describes how defendants came to rely on 23 the Agri Stats report for decision making. 24 And I think that it's also fair to infer 25 that -- that price-taking opportunities that</p>	<p style="text-align: right;">Page 324</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. In your mind, would the 3 subscription of the Agri Stats sales report 4 be a key indicator of whether they were 5 participating in the cartel?</p> <p>6 MR. RISSMAN: Objection. That 7 calls for a legal conclusion.</p> <p>8 A. Well, you keep seizing on the 9 sales, and I will grant you, it was very 10 important. But I think that the other 11 reports were also helpful in facilitating 12 coordinated, you know, pricing or output 13 decisions.</p> <p>14 I mean, the export report, for 15 example, would tell you whether your rivals 16 were abiding by an effort to move product out 17 of the domestic market so as to prop up 18 domestic prices.</p> <p>19 If you saw someone's export ratio 20 plummet well below what the other firms were 21 doing, that would be an indication that they 22 weren't -- they weren't going along.</p> <p>23 BY MR. COLEMAN:</p> <p>24 Q. So if we want to know if a farm is 25 participating in the cartel, we would look at</p>

Page 325	Page 327
<p>1 subscription of sales report and the export 2 report; is that right? 3 MR. RISSMAN: Object to form. 4 That calls for a legal conclusion. 5 MR. COLEMAN: Actually not. 6 BY MR. COLEMAN: 7 Q. I'm interested in your economic 8 opinion. 9 MR. RISSMAN: Well, 10 participation -- if you're going to 11 quibble with me, participation in a 12 conspiracy is a legal question. 13 A. Yeah. So my criteria -- when you 14 think about the economic criteria that I 15 employ from the economic literature, you 16 know, monitoring like inducements. I mean, 17 these are -- these are elements that in 18 indicia that economists have come up with in 19 their study of cartels over time. These are 20 characteristics that consistent with. 21 And so I do -- I do highlight who 22 was subscribing to which report and when, but 23 I don't know if I would allow that table to 24 dictate at least my inference as to when 25 someone was participating, and, you know, I</p>	<p>1 to why someone was out and not in on a 2 particular report in a particular year. I'm 3 not offering an opinion on that. 4 BY MR. COLEMAN: 5 Q. If defendants are requested by a 6 grocery retailer, for example, to submit bids 7 to an RFP, do you have any opinion as to how 8 the Agri Stats reports would help them win 9 that business? 10 MR. RISSMAN: Objection. Calls 11 for speculation, and I will also, 12 again, instruct the witness to the 13 extent he has an opinion about that in 14 this case, he can -- he can give it. 15 A. Yeah. I think that -- implicit in 16 your question is that -- is that the buyers 17 have access to the Agri Stats reports, the 18 same level of granularity as the defendants. 19 I'm not sure that that's the case. 20 BY MR. COLEMAN: 21 Q. No. I actually -- yeah. We'll 22 assume that the buyers don't have any access 23 to the Agri Stats reports. So we've got the 24 defendants who are, you know, pork packers. 25 They're selling pork to a retailer or a</p>
Page 326	Page 328
<p>1 also just want to say that participating in 2 an agreement is something that's outside of 3 my domain again. 4 I'm just merely looking at 5 qualitative evidence that's consistent with 6 the economic criteria of a cartel. 7 BY MR. COLEMAN: 8 Q. Yeah. That's what I'm -- I'm 9 interested in is your assessment of the 10 record evidence as an economist, and when 11 you're looking at one or more firms that 12 aren't subscribing to the Agri Stats reports, 13 that would indicate to you as an economist 14 that they don't appear to be taking 15 advantages of the purported cartel, right? 16 MR. RISSMAN: Objection. I will 17 instruct the witness not to offer 18 opinions he's not offering in this 19 case. 20 BY MR. COLEMAN: 21 Q. You're not going to answer? 22 MR. RISSMAN: He can answer if 23 he has an opinion about that that he's 24 offered in this case. 25 A. I have not offered an opinion as</p>	<p>1 wholesaler, and the wholesale is asking them, 2 sharpen your pencil. We want your best 3 prices, you know, for a specified product 4 list. 5 Do you ever see any indication 6 that the packers were consulting the 7 Agri Stats reports to figure out how to 8 respond to that bid? 9 MR. RISSMAN: Object to form. 10 Incomplete hypothetical. 11 A. Sitting here, I don't know if I 12 put forward evidence of the use of Agri Stats 13 to -- to inform a bid to an RFP. 14 BY MR. COLEMAN: 15 Q. Do you have any opinion or theory 16 as to how Agri Stats would be useful for that 17 scenario? 18 A. I haven't formed an opinion on 19 that yet, no. 20 Q. Can we turn to Tab 61? 21 A. Sure. 22 Q. Tell me when you're there. 23 A. I'm there. 24 MR. COLEMAN: And, Jacob, if you want to pull it up, we are on the</p>

<p style="text-align: right;">Page 329</p> <p>1 first page of the document.</p> <p>2 BY MR. COLEMAN:</p> <p>3 Q. So what's been marked as</p> <p>4 Exhibit 61 is a Clemens document that you</p> <p>5 cite in Footnote 259 of your report. But I'm</p> <p>6 interested in -- the Clemens document applied</p> <p>7 an industry overview. It talks about</p> <p>8 production. That's the third header down.</p> <p>9 It mentions that expansion of pork production</p> <p>10 is already in the works. Farrowing</p> <p>11 intentions, as reported by USDA, for this</p> <p>12 fall and winter are up 4 percent. Higher</p> <p>13 farrowings this fall should be palpable in</p> <p>14 the form of increased pork production in the</p> <p>15 spring of 2015.</p> <p>16 Do you see that?</p> <p>17 MR. RISSMAN: Take your time to</p> <p>18 look at the document and the footnote</p> <p>19 that it is cited in. You said 259, I</p> <p>20 think.</p> <p>21 THE WITNESS: Just one second.</p> <p>22 MR. RISSMAN: Yeah. Footnote</p> <p>23 259.</p> <p>24 BY MR. COLEMAN:</p> <p>25 Q. Tell me when you're ready.</p>	<p style="text-align: right;">Page 331</p> <p>1 MR. RISSMAN: Objection.</p> <p>2 Foundation.</p> <p>3 A. That's their assessment. I think</p> <p>4 that's fine, yes.</p> <p>5 BY MR. COLEMAN:</p> <p>6 Q. And you recognize that Clemens had</p> <p>7 announced a new plant in 2014, right?</p> <p>8 A. You will have to take me to that.</p> <p>9 I know you mentioned that earlier today. But</p> <p>10 is that in this document?</p> <p>11 Q. Are you aware of that fact?</p> <p>12 A. I don't know if I was aware of it,</p> <p>13 but you have mentioned that today, so I could</p> <p>14 either take your word for it.</p> <p>15 Do you think this document</p> <p>16 establishes that?</p> <p>17 Q. I don't know if it does or</p> <p>18 doesn't, but I'm interested in what you're</p> <p>19 aware of.</p> <p>20 A. Yeah. I haven't done a study of</p> <p>21 which plants were created by year.</p> <p>22 Q. Paragraph 78 of your report refers</p> <p>23 to the Seaboard Triumph plans being announced</p> <p>24 for a new plant being announced in 2015,</p> <p>25 right?</p>
<p style="text-align: right;">Page 330</p> <p>1 A. So I've read the three sub-bullets</p> <p>2 under production.</p> <p>3 Q. Yes. And the one I hadn't yet</p> <p>4 read into the record is the third one that</p> <p>5 said: Pork production expansion will</p> <p>6 continue into 2016, which will put downward</p> <p>7 pressure on prices. Right?</p> <p>8 A. Yes.</p> <p>9 Q. So at least in this period, which</p> <p>10 based on the dates referenced in the</p> <p>11 document, 2015 going into 2016, was the</p> <p>12 period of expanded pork production, right?</p> <p>13 MR. RISSMAN: Objection.</p> <p>14 Foundation. Assumes facts.</p> <p>15 A. Well, the document says pork</p> <p>16 production expansion will continue into 2016.</p> <p>17 So it suggests that at least for 2015, pork</p> <p>18 production was expanding.</p> <p>19 BY MR. COLEMAN:</p> <p>20 Q. And that's an internal Clemens</p> <p>21 document, right?</p> <p>22 A. Correct.</p> <p>23 Q. That's their assessment of what's</p> <p>24 happening in the marketplace in this -- in</p> <p>25 this period of time, right?</p>	<p style="text-align: right;">Page 332</p> <p>1 A. Let me get to 78.</p> <p>2 So, yes, there's a 2015 press</p> <p>3 release that I mentioned about -- about the</p> <p>4 cost of starting a new plant of 264 million</p> <p>5 as indicative of high-entry rigors.</p> <p>6 Q. Right. And that was --</p> <p>7 notwithstanding that cost, Seaboard and</p> <p>8 Triumph committed to it -- to pay that price</p> <p>9 in that time period, 2014 and 2015, right?</p> <p>10 MR. RISSMAN: Objection.</p> <p>11 Foundation.</p> <p>12 A. Yes. They -- they brought that</p> <p>13 plant online, and is also consistent with the</p> <p>14 conspiracy to suppress output. It's -- the</p> <p>15 theory of harm is not that the restraints</p> <p>16 were going to set capacity to zero. It's</p> <p>17 that the capacity would be less than it</p> <p>18 otherwise would be.</p> <p>19 So episodes of capacity increasing</p> <p>20 during the conduct period does not disprove</p> <p>21 the plants' theory of harm.</p> <p>22 BY MR. COLEMAN:</p> <p>23 Q. So investing hundreds of millions</p> <p>24 of dollars in a new pork packing plant is</p> <p>25 consistent with the conspiracy to restrict</p>

<p style="text-align: right;">Page 333</p> <p>1 the supply of pork; that's your opinion?</p> <p>2 A. It's not inconsistent. I think</p> <p>3 I'd put it that way. But the mere fact that</p> <p>4 a plant comes online during the conduct</p> <p>5 period doesn't disprove the theory of harm.</p> <p>6 Q. In any case, is the period 2014,</p> <p>7 2015, which we have at least two defendants</p> <p>8 announcing new packing plants and in the</p> <p>9 Clemens document in Tab 61, we see it's also</p> <p>10 a period of expanded pork production and hog</p> <p>11 production, right?</p> <p>12 MR. RISSMAN: Object to form.</p> <p>13 A. I mean, that's what the</p> <p>14 document -- this Clemens document says, that</p> <p>15 pork production expansion will continue into</p> <p>16 2016. It is what the document says.</p> <p>17 BY MR. COLEMAN:</p> <p>18 Q. When you looked at the data of</p> <p>19 what happened to the supply of pork, did you</p> <p>20 observe significant increases in supply in</p> <p>21 the period from 2014 to 2018?</p> <p>22 A. I mean, it's possible I came</p> <p>23 across production data, but I wasn't trying</p> <p>24 to model production. I think that other</p> <p>25 experts may have modeled production as their</p>	<p style="text-align: right;">Page 335</p> <p>1 the statute of limitations, as I understand</p> <p>2 it. So there's not an economically</p> <p>3 significant phenomenon that would cause me to</p> <p>4 think that you would want to treat 2014</p> <p>5 special. It's just as far back as plaintiffs</p> <p>6 could go to recover damages.</p> <p>7 So the start date for the conduct</p> <p>8 period is 2009, and I wouldn't expect there</p> <p>9 to be differences from 2009 to '14 from, say,</p> <p>10 2014 to 2018. Once you control for all other</p> <p>11 things, it will explain pork prices at the</p> <p>12 time.</p> <p>13 Q. Well, we have new plant and</p> <p>14 expanded hog production and significant</p> <p>15 increases and overall pork production in that</p> <p>16 period of 2014 to 2018, right?</p> <p>17 A. Well, if you are right --</p> <p>18 MR. RISSMAN: Object to form.</p> <p>19 It assumes facts not in evidence.</p> <p>20 A. If you're right that capacity is</p> <p>21 increasing from '14 to '18, then that should</p> <p>22 put downward pressure on prices, and if</p> <p>23 that -- and if that occurred, then the</p> <p>24 conduct parameter would have the opposite</p> <p>25 sign of the sign that I observed, which was</p>
<p style="text-align: right;">Page 334</p> <p>1 dependant variable, their key lens through</p> <p>2 which the harm would have manifested itself.</p> <p>3 I'm looking at pricing.</p> <p>4 Q. And I think we've established</p> <p>5 this, but just to revisit, did you do any</p> <p>6 analysis to assess what happened to the price</p> <p>7 of class products specifically in that period</p> <p>8 of 2014 to 2018?</p> <p>9 A. What happened to class products</p> <p>10 between 2014 and '18?</p> <p>11 Q. Yeah, the price of those products.</p> <p>12 A. Sorry. Of which products?</p> <p>13 Q. The class products. Pork products</p> <p>14 that you have included -- defined as class</p> <p>15 products.</p> <p>16 A. So 2014 to 2018 is inside the</p> <p>17 conduct period. It's also inside the class</p> <p>18 period. So I absolutely analyzed the price</p> <p>19 of those products.</p> <p>20 Q. And I am interested in</p> <p>21 specifically whether you focused on the</p> <p>22 overcharge for those products in that period</p> <p>23 between 2014 and 2018?</p> <p>24 A. I didn't treat those differently.</p> <p>25 You know, the 2014 start date is limited by</p>	<p style="text-align: right;">Page 336</p> <p>1 positive and statistically significant.</p> <p>2 So something doesn't add up in</p> <p>3 your story, and I think that looking at the</p> <p>4 capacity is perfectly reasonable, but I don't</p> <p>5 think that whatever episodes you're pointing</p> <p>6 to was enough to negate inflationary effect</p> <p>7 of the conduct on prices.</p> <p>8 BY MR. COLEMAN:</p> <p>9 Q. Well, it would -- one way you</p> <p>10 would know would be to isolate that period of</p> <p>11 2014 to 2018 and analyze whether there was an</p> <p>12 overcharge specifically in that period,</p> <p>13 right?</p> <p>14 A. No. I wouldn't do it that way. I</p> <p>15 think that you might be able to convince me</p> <p>16 to consider a measure of capacity as a</p> <p>17 further control variable, but I wouldn't want</p> <p>18 to go looking for arbitrary structural</p> <p>19 breaks, just applying the Chow test</p> <p>20 willy-nilly because economists know that you</p> <p>21 will -- you will get wrong inferences that</p> <p>22 way.</p> <p>23 And with the caveat, of course,</p> <p>24 that when you bring something like capacity</p> <p>25 in on the right-hand side of a reduced form</p>

<p style="text-align: right;">Page 337</p> <p>1 price regression, you could be engendering 2 endogeny, so you have to be careful about how 3 that enters the model.</p> <p>4 Q. I'm interested not just in 5 capacity, but that we know -- we have the 6 fact of capacity -- we have increased pork 7 production in that period, and I'm interested 8 in whether you see any merit in analyzing 9 that period of 2014 to 2018 --</p> <p>10 A. Not --</p> <p>11 Q. -- the total class period?</p> <p>12 A. No, no, not separately because we 13 don't -- we don't believe that the conduct -- 14 the challenged conduct has changed during 15 those period. Agri Stats is still putting 16 out the same kind of information-sharing rig 17 as it was in the prior years.</p> <p>18 So I'm gently pushing back on the 19 notion of treating those years as distinct 20 for the purposes of the economic model. I 21 think that -- that if you thought there were 22 significant shifts in the supply that my 23 model wasn't accounting for, those are the 24 types of variables you could bring it, but I 25 would be very loathed to estimate separate</p>	<p style="text-align: right;">Page 339</p> <p>1 BY MR. COLEMAN:</p> <p>2 Q. What are the three mechanisms to 3 reduce --</p> <p>4 (Simultaneous unreportable 5 crosstalk.)</p> <p>6 A. It's a marginal effect. It's not 7 a wipeout capacity.</p> <p>8 Q. One of the three levers of the 9 purported cartel was reducing the harvest of 10 hogs, right?</p> <p>11 A. Right.</p> <p>12 Q. And building a new plant and 13 increasing the harvest of hogs is 14 fundamentally at odds with that mechanism of 15 the cartel, right?</p> <p>16 MR. RISSMAN: Objection. Asked 17 and answered.</p> <p>18 A. I mean, when viewed in isolation, 19 it's certainly not helpful, but the fact that 20 there were some capacity -- some plants 21 brought online during, you know, this huge 22 period, 2009 to 2020 -- you know, the fact 23 that you can point to a plant coming online 24 doesn't -- doesn't lead me to believe that 25 that is dispositive and therefore, their --</p>
<p style="text-align: right;">Page 338</p> <p>1 effects in those years.</p> <p>2 Q. We talked about, you know, the 3 fact that cartels can fracture with cheating 4 based on the incentives of individual firms, 5 and why -- wouldn't you have expected to see 6 with Clemens or Seaboard Triumph operating 7 new plants, other members of the cartel 8 expressing some angst that the cartel members 9 are blowing open an agreement to restrict 10 pork supply by significantly increasing 11 capacity?</p> <p>12 MR. RISSMAN: Object to form.</p> <p>13 A. Well, I'm sure that competitors 14 don't like to see rivals increasing capacity. 15 All things equal, they consider that to be a 16 bad thing. But I don't know if any of them 17 are in a position to stop all capacity 18 increases.</p> <p>19 What -- what is being alleged here 20 is that there was a drawdown through various 21 means, the three mechanisms that we talked 22 about, in addition to just raising prices 23 generally that reduced capacity relative to 24 what it would have been in the absence of the 25 challenged conduct.</p>	<p style="text-align: right;">Page 340</p> <p>1 you know, the plaintiff's theory of harm must 2 be rejected. That would be an overreaction 3 to that effect.</p> <p>4 Q. Yeah. That might be true. But I 5 would expect to see other members of this 6 cartel, if it existed, expressing 7 consternation that the participants in the 8 cartel are significantly increasing capacity 9 in violation of how the cartel functioned 10 over time, right?</p> <p>11 MR. RISSMAN: Object to form.</p> <p>12 And calls for speculation.</p> <p>13 A. You might expect to see that, and 14 maybe -- maybe it's somewhere in the record 15 evidence those -- those three reactions. I 16 haven't studied the defendants' reactions to 17 these episodes of new plant openings.</p> <p>18 MR. COLEMAN: Why don't we take 19 a break. I think I may be close to 20 done. I am probably close to done on 21 the time anyway.</p> <p>22 MR. RISSMAN: Yeah, you got 23 13 minutes.</p> <p>24 MR. COLEMAN: Oh, okay. So 25 really close. So, yeah, I will take a</p>

<p style="text-align: right;">Page 341</p> <p>1 break and see if there's any wrap-up.</p> <p>2 THE VIDEOGRAPHER: The time is</p> <p>3 5:48 p.m. We are going off the</p> <p>4 record.</p> <p>5 (A brief recess was held from 5:48</p> <p>6 p.m. to 5:56 p.m.)</p> <p>7 THE VIDEOGRAPHER: The time is</p> <p>8 5:56 p.m. We are back on the record.</p> <p>9 BY MR. COLEMAN:</p> <p>10 Q. This is our last question or</p> <p>11 couple of questions. I would like to know</p> <p>12 what you did to prepare for the deposition</p> <p>13 today.</p> <p>14 A. Right. So I met with my staff to</p> <p>15 review certain questions that I had. Met</p> <p>16 with counsel. And I went back and read my</p> <p>17 report.</p> <p>18 Q. And how long did you meet with</p> <p>19 staff --</p> <p>20 A. I don't know if I -- yeah.</p> <p>21 Q. -- for preparation of the</p> <p>22 deposition?</p> <p>23 A. I don't know if I have a good</p> <p>24 estimate of hours. You know, I would say</p> <p>25 hours. And sometimes it's just a phone call</p>	<p style="text-align: right;">Page 343</p> <p>1 would like to do that now, that would be</p> <p>2 great.</p> <p>3 A. Yeah, that's great. It's just a</p> <p>4 handful, but as I was reading through it the</p> <p>5 last few days, I just spotted a few things</p> <p>6 that didn't make it into the errata, so I'll</p> <p>7 go through this very quick.</p> <p>8 Paragraph 112, I used the word</p> <p>9 "below" -- I should have used the word</p> <p>10 "below" instead of "above." It's when</p> <p>11 identifying pricing opportunities, and</p> <p>12 Smithfield was below the average, not above</p> <p>13 the average.</p> <p>14 Q. Okay.</p> <p>15 A. In Paragraph 114, I would like to</p> <p>16 amend a line about what the Clemens data --</p> <p>17 what can and cannot inform. Let me get to</p> <p>18 Paragraph 114.</p> <p>19 Sorry. Give me one second. It's</p> <p>20 in the regression section.</p> <p>21 Q. Is that Page 114?</p> <p>22 A. It was Page 114. I apologize.</p> <p>23 It's in the middle of the page. It is</p> <p>24 talking about what we can and cannot do with</p> <p>25 Clemens data.</p>
<p style="text-align: right;">Page 342</p> <p>1 for me to -- you know, to a case manager</p> <p>2 asking him a question.</p> <p>3 Q. How long did you meet with</p> <p>4 counsel?</p> <p>5 A. I think we had one session that</p> <p>6 was about an hour, and another session that</p> <p>7 was about two hours.</p> <p>8 Q. And how long did you spend</p> <p>9 reviewing your report in preparation for the</p> <p>10 deposition?</p> <p>11 A. I know -- I think it's easier to</p> <p>12 give it to you in days than hours, but I</p> <p>13 think that there were several days of</p> <p>14 reviewing the documents and the report. It's</p> <p>15 a long report.</p> <p>16 MR. COLEMAN: Okay. I have no</p> <p>17 further questions.</p> <p>18 MR. RISSMAN: Dr. Singer, I do</p> <p>19 just have one question for you.</p> <p>20 CROSS-EXAMINATION</p> <p>21 BY MR. RISSMAN:</p> <p>22 Q. I understand there are -- outside</p> <p>23 of the errata that you've already issued,</p> <p>24 there are a few additional errata that you</p> <p>25 wanted to put on the record. And if you</p>	<p style="text-align: right;">Page 344</p> <p>1 And the line that begins: This</p> <p>2 means the defendants' Clemens data cannot --</p> <p>3 and it should read: Directly inform the</p> <p>4 conduct parameter but will still contribute</p> <p>5 indirectly to informing the other parameters</p> <p>6 in the model with or without</p> <p>7 defendant-specific fixed effects.</p> <p>8 So the line as -- as it was</p> <p>9 written could create the impression that it's</p> <p>10 only informing these other parameters without</p> <p>11 defendant-specific fixed effects, and it</p> <p>12 turns out that the Clemens data, despite the</p> <p>13 fact it only shows up during the conduct</p> <p>14 period, is indirectly informing the conduct</p> <p>15 parameter via its influence on all the other</p> <p>16 parameters in the model, and that's true with</p> <p>17 or without fixed effects.</p> <p>18 And that's true as a theoretical</p> <p>19 matter, but also we've now run a model where</p> <p>20 you just take Clemens out using fixed</p> <p>21 effects -- defendant fixed effects, and the</p> <p>22 conduct parameter changes.</p> <p>23 So it's one way of saying that the</p> <p>24 defendant -- the Clemens data is informing,</p> <p>25 albeit indirectly, the conduct parameter</p>

1 despite the fact that it only shows up during 2 the conduct period. 3 And if I wasn't clear about that, 4 feel free to ask me any follow-on, but I 5 didn't think the sentence as written here was 6 correct. 7 There's a similar and related 8 issue in, I think it is Paragraph 193 where I 9 create the impression that Clemens is only 10 indirectly informing the conduct parameter in 11 the model without fixed effects, and it turns 12 out it's also indirectly informing the 13 conduct parameter even in the model with 14 defendant -- fixed effects. 15 That's Paragraph 193. Let me just 16 double check. Yes. 17 In the middle -- in the middle of 18 Paragraph 193 on Page 151, it says: However, 19 its conduct period data does contribute to 20 the conduct coefficient in Table 12, Model 1, 21 which does not use any fixed effects -- 22 "effects" is misspelled. But it's -- more 23 importantly, it actually is informing the 24 conduct parameter indirectly in every model 25 in Table 12, including those that used	Page 345 1 THE VIDEOGRAPHER: So if there 2 are no further questions, the time is 3 6:03 p.m. This concludes today's 4 deposition. 5 (Thereupon, the proceedings 6 concluded at 6:03 p.m.) 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Page 346 1 defendant fixed effects. 2 And then, finally, in 3 Paragraph 175 is the last one. It's a small 4 one, but it's important. The last line of 5 175 reads: You know, which is consistent 6 with economic theory that predicts that a 7 hundred percent of marginal cost increases 8 would be passed through to end users, and I 9 should have said in a competitively supplied 10 industry. 11 And, of course, the pass-through 12 rate is not a hundred percent in all cases. 13 So I left out an important caveat in that -- 14 in that line. 15 So those were -- those were things 16 that I just caught in my last read-through, 17 and, Mr. Coleman, if you wanted to ask me 18 follow-ons -- I realize I'm hitting you with 19 that now, but I didn't want to take away from 20 your time today. 21 MR. COLEMAN: I don't have any 22 further questions about that. 23 MR. RISSMAN: Okay. I think 24 we're done. 25 We'll read and sign.	Page 348 1 CERTIFICATE OF REPORTER 2 3 UNITED STATES DISTRICT COURT ) 4 DISTRICT OF MINNESOTA ) 5 6 I, ERICA FIELD, Stenographic Reporter, 7 certify that I was authorized to and did 8 stenographically report the deposition of HAL 9 SINGER, pages 1 through 347; that a review of 10 the transcript was requested; and that the 11 transcript is a true and complete record of 12 my stenographic notes. 13 I further certify that I am not a 14 relative, employee, attorney, or counsel of 15 any of the parties, nor am I a relative or 16 employee of any of the parties' attorney or 17 counsel connected with the action, nor am I 18 financially interested in the action. 19 20 DATED this 28th day of June, 2022. 21 22 _____ Erica Field 23 24 25

Page 349

1 ERRATA SHEET

DO NOT WRITE ON TRANSCRIPT - ENTER CHANGES

2 HERE

IN RE: Pork Antitrust Litigation

3 CASE NO. 0:18-CV-01776-JRT-HB

WITNESS: HAL SINGER

4 TAKEN: 06/24/2022

5 PAGE LINE CHANGE REASON FOR CHANGE

6 \_\_\_\_\_

7 \_\_\_\_\_

8 \_\_\_\_\_

9 \_\_\_\_\_

10 \_\_\_\_\_

11 \_\_\_\_\_

12 \_\_\_\_\_

13 \_\_\_\_\_

14 \_\_\_\_\_

15 \_\_\_\_\_

16 \_\_\_\_\_

17 \_\_\_\_\_

18 \_\_\_\_\_

19 \_\_\_\_\_

20 \_\_\_\_\_

21 \_\_\_\_\_

22 \_\_\_\_\_

23 Under penalties of perjury, I declare

that I have read the foregoing document and

24 that the facts stated in it are true.

25 \_\_\_\_\_

Date Hal Singer

\$	<b>14</b> 278:4 335:9,21 <b>15</b> 18:21 163:8 <b>151</b> 244:21,25 245:14 248:19 345:18 <b>152</b> 4:12 <b>153</b> 285:22 286:5 <b>155</b> 282:14 <b>156</b> 273:7 279:4 <b>158</b> 279:21 <b>160</b> 231:6 266:17,18,19 267:17 271:17 <b>164</b> 262:13 278:6,7 <b>167</b> 194:19,24 195:19 <b>16th</b> 209:7 <b>175</b> 346:3,5 <b>18</b> 4:9 145:4,9 334:10 335:21 <b>181</b> 291:7 298:5,9 <b>191</b> 6:12 <b>192</b> 267:12,20,22,23,24 <b>193</b> 267:21 345:8,15,18 <b>1994</b> 214:7 <b>1995</b> 205:23 <b>1998</b> 160:8 <b>1999</b> 160:8 <b>1:30</b> 151:18 <b>1:41</b> 163:15,17	<b>2007</b> 209:6,25 <b>2008</b> 69:10,13 70:4,7,16 154:4 155:17,24 160:4,6 171:2 213:23 244:19 <b>2009</b> 57:17 69:5,8 95:5,24 121:22 124:20 125:9,23 156:6,22 159:2,6 160:4,6,9 164:19 170:17 171:22 173:14 174:3 214:8 230:2 235:7,10, 13,21 236:4,12,16 237:8,11 238:14 247:20 248:24 249:7 300:6 303:9 315:5 335:8,9 339:22 <b>2010</b> 164:19 173:14 246:20 248:2,5 249:20 252:6 <b>2012</b> 6:14,16 231:14 241:1 <b>2014</b> 220:23 221:2 223:18 224:6 252:14 331:7 332:9 333:6,21 334:8, 10,16,23,25 335:4,10,16 336:11 337:9 <b>2015</b> 252:14 329:15 330:11,17 331:24 332:2,9 333:7 <b>2016</b> 195:8 330:6,11,16 333:16 <b>2018</b> 95:5,24 196:20 216:9 247:21 248:24 300:6 303:9 333:21 334:8,16, 23 335:10,16 336:11 337:9 <b>2019</b> 198:14 <b>202 887-3756</b> 3:9 <b>2020</b> 174:5 216:14 339:22 <b>2021</b> 145:16 <b>2022</b> 5:4 <b>21</b> 295:14 297:8 <b>210</b> 231:15,21 237:15 <b>211</b> 231:9 <b>212</b> 231:9 235:4 236:9,10 <b>213</b> 65:21 <b>217</b> 195:18 <b>219</b> 195:2,18,19,20 196:5 199:23 <b>22</b> 297:8 <b>2200</b> 3:17 <b>23</b> 20:9 267:13,20 268:3 275:15 <b>24</b> 5:4 153:2,4 160:10 <b>25</b> 84:9 277:12,19,21 <b>25.7</b> 124:24 125:14 <b>259</b> 329:5,19,23 <b>26</b> 151:22 160:11
0	<b>04</b> 171:6 <b>05</b> 171:6,21 <b>09</b> 166:12,24 <b>1</b> <b>1</b> 4:9 6:2,3 27:4 112:25 124:16,20 175:4 194:23 205:25 249:7 289:19 291:20 345:20 <b>1:3</b> 209:9 <b>10</b> 145:9 163:8 166:12,24 239:6 <b>100</b> 21:6 23:14 <b>104</b> 213:3 <b>105</b> 4:10 <b>1050</b> 3:8 <b>11</b> 216:14 241:11 <b>112</b> 343:8 <b>114</b> 343:15,18,21,22 <b>119</b> 183:13,17,18 <b>11:05</b> 84:14,15 <b>11:21</b> 84:16,18 <b>12</b> 241:12 270:1 272:18 273:18,21 279:23 345:20,25 <b>12:4</b> 289:12,13,14 <b>12:8</b> 248:23 249:11 289:6 <b>121</b> 4:11 <b>125</b> 270:1 <b>12:54</b> 163:12,15 <b>12th</b> 207:6 <b>13</b> 340:23 <b>130,000</b> 235:7 236:25 <b>134</b> 153:19 <b>136</b> 300:10 <b>139</b> 4:12	<b>2</b> <b>2</b> 4:9 18:9,10,16 26:25 27:22 32:10,19 37:12,14 52:24 55:2,5 139:18 156:23 279:23,24 <b>2:9</b> 209:9 <b>20</b> 148:24 149:11,21,23 150:19 151:5 269:16 <b>20,000</b> 235:10 237:11 <b>2002</b> 206:2 <b>2003</b> 207:3 <b>20036</b> 3:8 <b>2004</b> 170:25 <b>2005</b> 170:25 171:18 174:8 175:4,17 208:13 213:23 244:19

**2600** 3:3  
**264** 332:4  
**27** 230:18  
**270** 81:24 85:14 87:15  
**270-pound** 286:20

---

**3**

---

**3** 4:10 105:19,22 123:1 268:20 280:1  
**3.15** 209:10  
**30** 138:20 151:7,9  
**30,000** 235:12,21 236:4  
**312 862-2000** 3:13  
**340** 233:6  
**342** 4:3  
**348** 4:4  
**349** 4:4  
**394** 231:24 233:6  
**3:13** 238:2,5  
**3:25** 238:5,7

---

**4**

---

**4** 4:11 120:25 121:1,6 135:4 144:17,  
19 146:17 240:25 329:12  
**403** 235:23  
**42** 205:16,19,21 238:11,13  
**43** 207:3  
**44** 208:11  
**45** 153:17,23 205:14,25 209:6  
**451** 206:15  
**46** 156:5  
**47** 238:24 239:2  
**49** 126:17  
**4:43** 297:19,21  
**4:56** 297:21,23

---

**5**

---

**5** 4:2,3,12 139:8,14 144:19 146:14  
152:3  
**5.6** 124:21 125:14

**50** 3:3 6:13 100:3,7 153:19 208:10  
**5002** 241:20  
**5007** 239:6  
**55402** 3:4,18  
**5:48** 341:3,5  
**5:56** 341:6,8

---

**6**

---

**6** 4:9,12 18:8,13,15 152:4,7,8,13  
164:3 205:15  
**60** 223:5  
**601** 118:8  
**60654** 3:13  
**61** 328:20 329:4 333:9  
**612 335-1808** 3:4  
**612 766-8862** 3:18  
**62** 105:7  
**65** 120:20,22  
**66** 139:6  
**6:03** 347:3,6

---

**7**

---

**7-eleven** 295:15  
**70** 125:9,17,22 234:18  
**765** 236:1  
**78** 331:22 332:1  
**7th** 3:17

---

**8**

---

**8** 214:19,23  
**8(c)(1)(a)** 65:14  
**80** 278:22  
**81** 159:25 164:5

---

**9**

---

**9** 214:18,21  
**90** 3:17  
**90-minute** 237:23

**90s** 171:8,18  
**924** 236:1  
**93** 168:22  
**99-point-something** 288:21  
**9:39** 5:2,5

---

**A**

---

**a.m.** 5:2,5 84:14,16,18  
**abiding** 324:16  
**ability** 142:21 283:13 309:3  
**abroad** 190:5 208:14 209:1 211:9  
**absence** 192:14 201:18 216:24  
225:24 247:14 254:24 287:24 318:23  
320:9 338:24  
**absent** 40:20 61:13 161:13 215:6  
244:18 254:8 256:15 258:14 306:16  
308:12 318:13 319:4  
**absolutely** 91:3 176:2 269:19  
334:18  
**abstract** 189:11 317:5  
**academic** 226:2 243:20  
**accelerated** 216:23  
**accept** 11:17 16:10 94:10,23 102:13  
111:19 155:6 160:19 179:18 223:14  
271:11,13  
**accepted** 12:12,16 23:4  
**accepting** 10:16 16:1 263:1  
**access** 150:12 327:17,22  
**accommodate** 154:19  
**accommodated** 170:13  
**account** 17:6 27:2 57:9 171:9 175:6,  
14 183:8 184:2,24 186:10 203:6  
242:6 281:12 291:11,22 292:2 294:23  
**accounted** 166:7,8 291:13,20  
**accounting** 175:12 184:8 185:3  
292:4 337:23  
**accounts** 57:2 185:4 268:20  
**accuracy** 313:12  
**accuse** 44:15  
**accusing** 49:19  
**achieve** 36:10 95:1  
**achieved** 43:17 58:23 61:16,18

197:11 201:8 306:16  
**acknowledge** 32:1  
**acquired** 150:5  
**acquisition** 150:4,10  
**act** 59:3 135:14  
**acting** 44:25 50:13  
**actions** 197:2 221:4 250:3 254:1  
**actively** 207:10,12 223:8 225:9  
**activities** 301:24  
**activity** 90:21 189:23 204:2,3  
**acts** 17:20 19:1  
**actual** 41:24 203:2 230:15 247:16  
258:12 288:1,5 289:11,16  
**add** 158:12 178:22,25 204:19 242:18  
336:2  
**added** 156:8 282:16 312:22  
**adding** 126:13 138:9  
**addition** 180:21 338:22  
**additional** 204:19 342:24  
**additionally** 280:3  
**address** 169:7 240:4  
**addressed** 244:12  
**adequately** 24:12  
**adjudicated** 38:3  
**adjusting** 322:18  
**admissible** 23:22  
**admit** 323:11  
**admonished** 260:11  
**advantages** 326:15  
**advent** 255:14  
**advise** 92:15  
**advocating** 209:25  
**affect** 75:17 138:4 147:5,20 175:20  
221:15 222:18,20 232:22 242:20  
262:2 285:5,7 293:5  
**affected** 104:24 131:12 217:24  
218:16,19 274:7 321:11  
**affecting** 24:6 122:15 204:11  
**affirmed** 5:17  
**agencies** 144:22

**aggregate** 10:8 117:12 291:1  
**aggregated** 108:12 115:8,18 308:16  
309:8  
**agnostic** 75:15  
**agree** 19:6 21:20 22:13 31:23 91:16  
137:4 141:20 197:1 203:12 304:18  
**agreed** 42:14 49:2 68:1,5  
**agreement** 32:22,25 33:3,4,15,20  
36:8,17,22,23 37:21 39:7 43:23 44:5,  
8 45:8 48:19 51:14 52:9,25 53:19  
54:2,13,19 56:21 57:1,2,10 58:1,14,  
20,22 59:8,13,14,16,18,24 60:3 68:14  
70:24 71:2,10,12,14,18,20,22 101:5  
109:9 111:11 120:2 216:22 259:4  
300:20 301:5,18 302:7 303:4,10,18  
305:4,12 306:2,7,11 316:8,13,14,16,  
22 317:5,6,15 318:16,23 319:3,4  
326:2 338:9  
**agreements** 68:15 220:14 221:1  
**Agri** 32:15 36:6,18 44:9,15,18,25  
48:2 50:14 52:11 53:3,7 56:24 57:4,  
11,18,23 58:2,14 59:1,21 60:16 67:15  
69:6 70:10 108:10 150:7,13 189:24  
191:22 193:19 202:3 229:19 230:2  
238:15 248:11 255:14 300:3,4,23  
302:3,15,25 304:14,20 305:3,7,23  
307:15,18 308:2,23 309:5,13,16,24  
310:13,25 311:8,14,16 312:4,14,19,  
22 313:20,24 314:2,6,10,18 315:6  
317:10,16 319:20 320:15 321:1,7,22  
322:17,23 323:1,6,14 324:3 326:12  
327:8,17,23 328:7,12,16 337:15  
**agricultural** 122:8 140:14 173:5  
217:7 223:10  
**Agriculture** 121:14 223:8,19  
**aha** 254:10  
**ahead** 15:22 51:10 52:17 58:8 69:21  
93:8 105:13 114:15 158:13 179:21  
180:13 224:19,20 231:7 253:11,20  
267:19  
**aim** 176:6 215:11 226:16  
**aimed** 97:19 130:10 136:25 150:15  
218:6  
**aiming** 131:13  
**alarm** 305:9  
**albeit** 279:19 344:25  
**Aldi** 295:15  
**alerting** 302:16

**allegation** 9:17 36:3 49:18 51:13  
54:10 78:24 136:19 143:14 144:3  
148:14 169:10 199:17 230:23 250:14  
**allegations** 39:6 44:6 46:7 77:7,8,  
21,25 78:14 100:9,20 136:25 169:6  
198:22 243:5 247:19 258:2 259:2  
**allege** 161:25  
**alleged** 8:25 32:12 36:20,24 37:17  
42:20 43:14 52:24 53:11 56:14 57:15  
58:22 59:17 61:14 67:12 70:13 71:14,  
18 74:13 77:16 79:22 101:8 108:13  
117:4 120:2 128:23 130:2,3,10  
136:10 161:14 190:18 194:12 200:15  
203:8 214:3 230:4,20 244:16 247:20  
250:4 253:25 256:22 263:10 300:8  
302:6 303:10 338:19  
**allegedly** 43:2 55:10 191:13 214:16  
**alleges** 60:2  
**alleging** 250:16  
**allocated** 224:7  
**allowed** 258:9 274:15 296:20 315:21  
**allowing** 189:24 312:23  
**alongside** 284:22  
**alternative** 21:3,10 23:13,18 31:6  
166:17 226:4  
**AMARTO** 3:14  
**amarto.bhattacharyya@kirkland.com** 3:14  
**Amazon** 295:16  
**ambiguous** 207:19  
**amend** 343:16  
**America's** 160:3 208:13,20,25  
**American** 160:15 207:21 212:9  
**amount** 9:23 66:24 87:22 108:22  
123:25 148:17 200:22 224:7 227:11  
228:3 247:6 249:10 316:15  
**amounting** 160:11  
**amounts** 87:19  
**amplified** 216:23  
**analyses** 11:18 97:20  
**analysis** 11:22 12:3 16:24 17:19  
19:18 20:1 21:21 22:14 23:8 24:12  
28:19 29:7 32:2 62:24 63:25 73:17  
131:13 133:10 162:15 184:23 188:21  
192:16,18 198:8,15 289:24 290:8,14,  
21 291:5 294:4 296:7,10 316:25

319:13 320:3 334:6  
**analyze** 95:4,14 120:19 336:11  
**analyzed** 49:8 91:6 95:16 334:18  
**analyzing** 17:8 337:8  
**ancillary** 229:22  
**angst** 338:8  
**animal** 286:6  
**animals** 180:2  
**announced** 331:7,23,24  
**announcing** 333:8  
**annual** 261:13,20 262:21  
**answering** 15:3 35:2  
**answers** 285:15  
**anticipated** 239:17  
**anticompetitive** 9:1 13:12 24:4  
27:25 38:15,22,24 59:3 63:8 68:11  
133:14 137:1 193:16 197:22 201:24  
204:2 205:12 215:15 225:21 244:5  
262:23 264:7 266:9,16 306:12,20  
319:9  
**antitrust** 5:8 6:19 7:1,2,4,11,14,16,  
20,22,25 8:5,12,15,19 9:2,9,10,15,18,  
19,23 10:7,12 11:7 12:8,24 13:19  
14:14 17:17 19:17,19 23:21 25:23  
27:9 36:15 176:9 188:7 197:4,9  
203:13,24 204:1 227:9 277:24 305:21  
**apiece** 250:12  
**apologies** 282:14  
**apologize** 69:22 343:22  
**Apotex** 4:9 18:16 21:4 23:14 26:7,8,  
23,24 29:19  
**Apotex's** 20:17  
**apparently** 83:11  
**appearance** 7:1  
**appearances** 3:1 5:11  
**appeared** 194:10 231:16  
**appears** 6:18 159:3 164:19 266:16  
304:15  
**apples** 292:7,16 293:7,8  
**applied** 329:6  
**apply** 12:9,14,17 14:12 16:14 38:5  
182:14 184:10  
**applying** 185:18 336:19

**approach** 57:14 201:3  
**approximately** 5:5  
**approximation** 6:20  
**April** 156:6  
**apriority** 247:18  
**arbitrary** 251:24 336:18  
**area** 6:22 8:15,20  
**areas** 38:17  
**Argumentative** 51:8  
**argumentive** 225:17 233:15  
**arrangement** 123:11  
**arrangements** 122:13 124:18  
**arrival** 46:18  
**arrive** 287:15  
**article** 140:1  
**articulation** 59:6  
**artificial** 223:3  
**artificially** 66:21 129:9,13,14 130:21  
147:4 193:22  
**ascertain** 53:23 114:5,20 120:12  
**ascertained** 127:3 285:17  
**aspect** 54:13 55:7 59:12  
**aspects** 36:9  
**ASRM** 29:15,16  
**asserting** 250:11 251:11  
**asserts** 69:4  
**assess** 13:25 18:3 28:20 30:22,24  
33:16 53:25 62:19 191:25 228:18  
334:6  
**assessed** 91:11  
**assessing** 15:25 29:25 35:7 306:11  
**assessment** 14:20 20:22 28:13  
38:25 98:3 141:11 326:9 330:23  
331:3  
**assessments** 258:22  
**assignment** 19:12 230:12,16 290:24  
**assistance** 309:24  
**assisted** 237:20  
**Associates** 3:23  
**association** 315:20

**assume** 28:3,8,13 39:20 40:9 42:12  
71:1 80:19 83:10,12 137:12 155:12  
169:24 174:2 251:3 270:8 313:8  
327:22  
**assumed** 23:10 64:2 66:14 136:4  
**assumes** 20:1,13 21:21 22:15 70:4  
250:4 251:1 330:14 335:19  
**assuming** 20:15 28:8 71:11  
**assumption** 18:5 69:19 71:9  
**assumptions** 186:6 286:25 287:5  
**atomistic** 138:2  
**attached** 267:20  
**attempt** 136:13 145:21 258:3  
**attempted** 310:24 311:16 312:3  
**attempts** 138:23 311:3  
**attended** 316:4  
**attention** 131:14  
**attributable** 226:13 286:12  
**attribute** 204:12  
**attributed** 62:7 96:24 97:11 98:4  
162:18 177:10 192:10 216:1 243:15  
246:16  
**attributes** 288:4  
**author** 140:9  
**authored** 140:1  
**authoritative** 144:12 271:5,12,14  
**authority** 271:2  
**authors** 121:7  
**automatically** 288:24  
**availability** 66:1 195:6  
**Avenue** 3:8  
**average** 92:10 94:24 251:19 285:13  
286:19 289:13 306:23,25 307:3,5,12,  
19,22 308:8,14 343:12,13  
**avoid** 219:6  
**aware** 25:22 43:4 71:24 72:3 73:6  
74:6,16 76:25 77:24 78:13,23 83:16,  
18,24 84:2 86:3 87:17,20 89:14 103:3  
134:1 143:22 144:6,7,12 181:4,8,17  
184:3 196:17,19 216:13 224:2 226:19  
227:10 231:10 236:6,11 247:25  
252:11 261:11 264:17 289:22 302:12  
303:14 305:2 306:1 310:23 314:16  
320:24 331:11,12,19

<p><b>B</b></p> <p><b>B1</b> 245:5,24</p> <p><b>Bac</b> 3:23</p> <p><b>back</b> 8:22 22:4,8,9,11 25:12 30:2,20 33:22 36:25 37:19 41:4,14 42:5,7 51:24 52:6 59:23 61:22 66:3 74:23 76:15 78:4,9 84:18 86:24 95:7 96:1 97:3 105:9 110:23 116:10 119:7,9 136:23 140:8 163:17 164:24 167:1 169:17 170:18,22 171:19 174:11 175:4 176:24 178:16 182:19 184:6 185:13 187:7 189:4 200:12 204:19 205:14 235:3 238:7 244:7 248:19 252:1 278:9 282:4 284:5 286:18,22 287:10 292:22 294:1 297:23 300:3 335:5 337:18 341:8,16</p> <p><b>background</b> 91:4 96:5 104:4 135:5 153:12,15</p> <p><b>backs</b> 146:18</p> <p><b>bacon</b> 268:24</p> <p><b>bad</b> 155:14 165:1 338:16</p> <p><b>BAKER</b> 3:16</p> <p><b>barns</b> 146:21 147:9</p> <p><b>barriers</b> 101:15,24</p> <p><b>base</b> 106:22 109:8</p> <p><b>based</b> 17:3 28:15 29:2 90:2 92:20 138:18 140:21,22 184:22 186:19 266:4 278:1 284:19 294:11 317:15 319:16 322:8 330:10 338:4</p> <p><b>bases</b> 27:7 187:1</p> <p><b>basic</b> 61:22 88:25 319:7,10</p> <p><b>basis</b> 21:1,9 25:4,15 34:11,12 36:2 126:21 127:1 141:10,14 157:12 182:20 186:21,22 188:6 189:19 276:6,7 298:25 299:1 308:15</p> <p><b>Bates</b> 238:24</p> <p><b>beef</b> 106:9 267:4,14 268:1,13 270:9, 12</p> <p><b>began</b> 5:2 57:19 69:5</p> <p><b>begin</b> 69:8</p> <p><b>beginning</b> 156:5 170:19</p> <p><b>begins</b> 344:1</p> <p><b>begun</b> 70:11</p> <p><b>behalf</b> 3:2,7,11,16 5:10 7:4,11,14,19, 24 19:18 25:24</p>	<p><b>behavior</b> 20:2,16 21:22 22:16 23:10 26:9,17 28:4 53:23 135:9 198:5 255:16 264:15</p> <p><b>belief</b> 16:2 240:24</p> <p><b>bell</b> 152:21</p> <p><b>bellies</b> 179:16</p> <p><b>belts</b> 305:9</p> <p><b>belly</b> 179:1 268:1,12,16,20</p> <p><b>benchmark</b> 69:11 70:18,19 177:11 244:9,14,15 321:18</p> <p><b>benchmarking</b> 64:10</p> <p><b>beneficial</b> 188:18</p> <p><b>benefit</b> 137:16 153:19 210:12 312:15</p> <p><b>benefited</b> 237:12</p> <p><b>beta</b> 245:5,25 246:3,9 248:19</p> <p><b>BHATTACHARYYA</b> 3:14</p> <p><b>bid</b> 322:18,19 328:8,13</p> <p><b>bids</b> 327:6</p> <p><b>big</b> 82:3,13 105:12 166:12,24 221:1 271:8</p> <p><b>bigger</b> 75:2 83:6</p> <p><b>bill</b> 223:18 224:6</p> <p><b>billion</b> 156:11,23 157:14,19 159:12 160:11,15,22 161:17 209:9,10</p> <p><b>binder</b> 105:12</p> <p><b>binder-flipping</b> 152:1</p> <p><b>biological</b> 72:13</p> <p><b>biology</b> 185:9,11 186:19</p> <p><b>bit</b> 8:3 41:11 44:13 100:19 192:5 271:1 300:16</p> <p><b>blatant</b> 305:8</p> <p><b>blatantly</b> 113:16 118:10</p> <p><b>blow</b> 154:8</p> <p><b>blowing</b> 338:9</p> <p><b>blue</b> 169:20,23,25 226:6</p> <p><b>board</b> 155:17</p> <p><b>boasted</b> 310:19</p> <p><b>bone</b> 199:11</p> <p><b>boost</b> 307:1</p> <p><b>bottom</b> 183:13,18 196:5 308:9</p> <p><b>bought</b> 127:20 299:10</p> <p><b>bouncing</b> 282:15 284:5</p> <p><b>bounds</b> 79:18</p> <p><b>bow</b> 60:17</p> <p><b>box</b> 106:9</p> <p><b>boxes</b> 248:17</p> <p><b>brand</b> 285:2 294:3,5</p> <p><b>branded</b> 294:19</p> <p><b>brands</b> 281:22 296:23 297:1</p> <p><b>breadth</b> 106:16</p> <p><b>break</b> 72:7 84:10 87:25 88:2 90:2,5 163:21 248:2 255:1 293:11 297:16 340:19 341:1</p> <p><b>break-even</b> 87:18,22</p> <p><b>breaking</b> 308:18,19</p> <p><b>breaks</b> 88:18 251:23 336:19</p> <p><b>bred</b> 153:8</p> <p><b>breed</b> 141:7 142:7</p> <p><b>breeding</b> 168:23 169:1,8,18,21,25 170:2,7,25 171:2,11,22 172:3 173:9</p> <p><b>Brenneman</b> 196:21</p> <p><b>Brian</b> 145:4</p> <p><b>bring</b> 336:24 337:24</p> <p><b>bringing</b> 106:16 219:15 285:9 312:23</p> <p><b>brings</b> 161:12</p> <p><b>broad</b> 32:11</p> <p><b>broke</b> 209:7</p> <p><b>broker</b> 68:6 277:4</p> <p><b>brought</b> 281:25 332:12 339:21</p> <p><b>bu</b> 288:6</p> <p><b>build</b> 253:14 256:10</p> <p><b>building</b> 339:12</p> <p><b>built</b> 174:20 257:5</p> <p><b>bullet</b> 108:17 113:22 119:21 149:12 156:22 159:3 206:8 209:17,20</p> <p><b>bunch</b> 274:6</p> <p><b>bungs</b> 228:4</p> <p><b>burden</b> 18:23 19:10,11,14 27:5,20</p> <p><b>business</b> 6:1 25:3,14,15 27:11 92:15 327:9</p> <p><b>but-for</b> 20:13 39:21,25 40:3,5,9,14,</p>
---	---

20 41:3,6,22 42:1,4 43:11 56:18,20  
60:8,9,11,18,20,21,22 61:1,10,13,25  
62:20 63:2,3 64:4,18,19 161:13 162:6  
191:11 192:25 193:2,6 194:1 200:21,  
23 203:3 215:1,10 230:14 243:7  
254:2,7 256:15 257:14,16,24 258:10  
260:13,14,23 261:7 287:15,16 288:13  
289:9

**butts** 179:2,17

**buy** 77:2 89:11 93:15,21 181:24  
293:19

**buyer** 281:19

**buyers** 143:8 327:16,22

**buying** 94:20 135:2,9 138:10 143:25  
147:5,17 172:7 180:15 181:2

**buys** 181:5,9 277:2

## C

**cadence** 237:23

**cahoots** 46:17,21 47:8 49:16,24

**cajoling** 50:15,21 51:19

**calculate** 21:3

**calculation** 20:13,18 21:12,19 23:9  
29:21 30:5,9 288:9

**calculations** 99:12

**call** 34:17 52:10 58:18 68:12 72:9  
105:14 120:20 144:21 219:10 230:18  
238:10 274:23 289:9 314:17 341:25

**called** 31:7 123:3 167:13 206:11  
213:4

**calls** 12:25 13:5 16:18 19:7 20:5  
21:25 23:24 26:21 33:8,11 37:25  
38:11 42:19 44:22 48:21 69:16 93:17  
134:7 172:24 190:12 191:8 201:16  
244:2 259:7 264:21 314:23 316:18  
323:18 324:7 325:4 327:10 340:12

**campaign** 70:12

**Canada** 138:10

**capability** 309:22

**capable** 81:3 102:4 103:17,19,21,25

**capacitors** 30:21 305:10

**capacity** 141:2 252:12,18 253:24  
254:5,7,14 255:21 256:3,14,17,19,24  
257:8,9,12 258:16,25 259:19 318:15  
319:8 332:16,17,19 335:20 336:4,16,  
24 337:5,6 338:11,14,17,23 339:7,20  
340:8

**capita** 217:25 218:3 271:16

**capital** 32:5,6

**captioned** 18:16

**capture** 171:15 176:15 217:19 218:3  
229:17 255:23 291:16

**captured** 154:22 170:10 173:22  
174:6 187:17 283:18,22 286:1

**captures** 218:25 236:10

**capturing** 90:20 91:8 124:13 125:8  
167:8 185:23 218:6,23 284:1

**carcass** 178:25 179:10,22,25

**carcass-purchased** 106:23

**care** 197:2

**career** 29:11 271:8

**careful** 337:2

**cares** 35:5

**cartel** 44:14,16,19,21 45:1,7,9 53:23  
70:14 135:9 136:4,5 194:12 205:11,  
12 214:9 253:5 264:2,14 266:2  
300:14,17,18,20,24 301:4,8,13,16,17,  
22,24 303:3,8,9,17 304:3,16 305:24  
306:25 309:6,11 314:18,20 315:16  
316:24 323:16 324:5,25 326:6,15  
338:7,8 339:9,15 340:6,8,9

**cartel's** 302:6

**cartel-like** 198:5 255:15

**cartels** 301:3 325:19 338:3

**carve** 142:10

**case** 7:11,17,23 9:25 10:21,22,24  
11:17,21,23 12:2,7 13:8,11,14 14:2,9  
15:25 16:10,15 17:4 18:16,18 22:22  
23:21 24:24 25:21 26:25 27:4,19,22,  
23 28:11,20 29:19,23 30:1,6,21 31:3,  
4,10 32:8 39:14 49:14,23 62:19 73:4  
90:8 95:12 113:18 132:5 136:17  
150:10 155:16 159:4 173:11 188:13  
198:21 204:1 210:16,18,25 211:7,16,  
20 239:24 242:15 243:6,23 247:22  
260:6 268:7 289:23 290:20 305:3,10,  
14 309:2 315:2 320:1,3 326:19,24  
327:14,19 333:6 342:1

**cases** 6:13 7:1,2,10,18 8:10 9:8,21,  
25 10:6 11:18 12:15 27:17 29:12 32:2  
33:14 34:16 346:12

**cash** 109:6

**casual** 116:21

**catastrophe** 159:20

**catch** 69:24 109:3

**categories** 65:3 122:19 124:5,11  
125:3,7 277:6

**category** 111:23 113:1 114:22  
115:25 118:13 123:21 298:8

**cattle** 106:8

**caught** 25:10 346:16

**causation** 17:25 18:3,6 19:15

**caused** 9:9 17:20 18:25 154:9  
155:18 204:18 230:9 239:14

**caveat** 124:12 142:8 147:25 336:23  
346:13

**center** 44:9

**centerpiece** 36:12 39:16

**centers** 297:6

**central** 300:5,7

**cents** 205:25

**CEO** 196:6,21 197:23

**CEO-TO-CEO** 196:14

**CEOS** 188:16,22 189:22 191:18  
193:18 197:15 198:13,25 200:1  
201:19

**Cephalon** 4:9 18:17

**CERTIFICATE** 4:4

**certified** 31:4

**cetera** 99:14 179:2 219:3 287:2

**challenge** 240:9

**challenged** 9:10 25:1 28:10 32:5,6,  
7,12 33:23 35:14,21 37:1,6,11,16  
38:9,21,24 39:2,13,15 40:1,6,11,21  
41:9 42:8,10 52:7,19,23 54:18,23  
55:2,8,15 56:6,20 58:16 59:7 60:23  
62:8 64:25 91:17,19,23 97:12 98:5  
100:9,24 101:4 128:18 129:8 131:12  
136:12 145:22 146:2 161:13 162:19  
163:3,4 166:14 176:7,22 177:5,11  
189:2,7,12 191:6 192:10,15 202:14,  
23 203:3,8 204:14 215:6 216:2,25  
217:3 225:24 229:22 230:19 243:15  
244:16,18 245:5,24 246:4,17 247:15  
248:8 249:2 250:9 254:8,14 255:24  
256:15 257:11 261:4 263:4,17 265:25  
270:23 275:10 276:15 287:25 300:8  
315:4,17 316:9 337:14 338:25

**challenges** 293:18

**challenging** 154:7 156:8

<b>chance</b> 203:5	<b>cited</b> 140:3,6,11 198:20 238:23 265:15 302:2 304:14 321:21 329:19	61:6 65:6 66:2 68:18 69:1,9,17,20 70:1,22 71:23 73:12,23 74:15,22 75:22 76:13,24 77:19 78:11,21 79:4, 11,19 83:14 84:11,19 86:14,23 88:24 92:17 93:3 94:1,16 95:13,22 96:8,22 98:8 99:3 100:16 102:2 103:11 105:11,15,25 108:1,15 109:20 111:25 112:5 113:19 114:1,14,18 118:2,17, 21 119:1,3 120:4,23 121:4 124:3 126:10 128:3,13 129:16 130:13,23 133:1 134:13 136:1,18 137:13 138:6 139:3,7,12,16 140:18 142:1 145:6 147:7,22 148:5,15 149:6,24 151:13, 21,23 152:4,10 153:18,23 154:3 155:15,23 158:9 159:24 161:11 162:4,21 163:7,18 164:7,10 166:5 168:10 172:16 173:4,23 178:7,20 179:15 182:7 190:6,21 191:14 194:3, 22 195:1 199:6,15 200:11 201:1,12 202:11 203:22 205:13,20,22 208:9 209:4,21 210:9,19 211:1,21 212:6,15 213:2,7,21 215:7 217:15 220:5 222:15 224:1,13 226:10 228:16 230:17 233:11,17,24 235:2 237:5,21 238:9 241:13 242:15,22 244:6 245:15,21 252:20 256:4 259:22 260:9 263:15,22 264:16 265:3 275:2 297:15,24 303:1 305:1 306:21 310:22 314:15 315:11 316:1 317:8 318:5 320:13,23 321:19 322:13 324:1,23 325:5,6 326:7,20 327:4,20 328:14,24 329:2,24 330:19 331:5 332:22 333:17 336:8 339:1 340:18,24 341:9 342:16 346:17,21	
<b>change</b> 245:4,23 246:16 267:18 270:19 286:5	<b>citing</b> 233:2		
<b>changed</b> 184:17 246:2 337:14	<b>claim</b> 8:4,7 18:25 141:17 311:21		
<b>characteristics</b> 294:24 325:20	<b>claimed</b> 17:19		
<b>characterization</b> 104:11 304:19 322:12	<b>claims</b> 6:19 189:18 259:2		
<b>characterizing</b> 130:1	<b>clarification</b> 22:2 33:10 89:13 116:17 118:5 131:17 142:3 158:4 183:4 197:19 233:23		
<b>charged</b> 299:13	<b>clarify</b> 210:15 232:19 277:11 298:1		
<b>charges</b> 296:23	<b>class</b> 31:4 78:25 143:21 145:17 166:20 177:3 189:6 200:14 213:13,20 220:18,20,21 225:11 226:22,25 228:11,21 229:8,12,13 230:8 231:12 236:7 248:22 249:12 251:17 252:13, 22 253:1 255:2 257:5 261:13,25 290:2,5,9,12,16,19,22 291:1,3 292:1 334:7,9,13,14,17 337:11		
<b>Charles</b> 3:23	<b>clean</b> 64:12 70:18 177:12 244:16,20 321:18		
<b>chart</b> 165:12 169:16 170:1 213:4,5,8 248:13	<b>clear</b> 16:9 40:5 42:6 43:12,13 62:5 63:22 71:16 77:8 86:25 100:22 116:25 131:18 141:21 251:21 298:4, 14 345:3		
<b>chase</b> 208:12 259:24	<b>Clemens</b> 3:11 196:7,8 232:1 252:21 312:3,7 329:4,6 330:20 331:6 333:9, 14 338:6 343:16,25 344:2,12,20,24 345:9		
<b>cheaper</b> 181:25	<b>client</b> 48:6 49:19 180:21		
<b>cheat</b> 301:4	<b>clients</b> 16:12 242:11 318:18		
<b>cheating</b> 301:9 309:10 338:3	<b>close</b> 262:24 340:19,20,25		
<b>check</b> 170:19,20 171:19 174:11 286:23 292:22 293:12 294:1 295:3 311:15 323:10 345:16	<b>closed</b> 199:22		
<b>checked</b> 248:17	<b>closer</b> 227:18		
<b>checkoff</b> 152:14,20 154:4 155:16 164:3 205:15,24 206:1,6,9,12,13,24 207:1,10	<b>club</b> 304:25		
<b>Checkout</b> 206:11	<b>Coast</b> 150:20		
<b>Chicago</b> 3:13	<b>coefficient</b> 245:9 272:10 273:25 279:13 345:20		
<b>chicken</b> 267:5,14 268:1,13 270:9,12	<b>coefficients</b> 268:19 274:16 287:21, 23		
<b>China</b> 219:2 239:15	<b>coincides</b> 145:17		
<b>choosing</b> 244:14	<b>Coleman</b> 3:19 4:3 5:21 6:5,10 9:20 10:9 11:1 12:6 13:2,16 15:2,8,14,21 16:22 17:12 18:7,14 19:16,24 20:8 23:6 24:9 25:2,13 26:5 27:8 28:17 33:21 38:7,18 41:20 43:21 44:12 45:6 46:12 47:19 48:12,23 49:10,12 50:2, 17,25 51:1,9 52:15 53:4 54:5,21 55:19,21 56:3 58:6,11 59:4,22 60:24		
<b>chop</b> 284:25			
<b>chops</b> 284:21			
<b>chose</b> 265:10			
<b>Chow</b> 3:20 336:19			
<b>circa</b> 104:15			
<b>circle</b> 66:3 86:24			
<b>circo</b> 104:18			
<b>circovirus</b> 104:13,16,17,19,20			
<b>circumstance</b> 159:6			
<b>circumstances</b> 158:23 161:8			
<b>citations</b> 140:10			
<b>cite</b> 144:17 153:6 190:14 198:17 238:19 260:24 271:1 300:16 329:5			

<b>committed</b> 332:8	<b>Compound</b> 255:10	344:4,13,14,22,25 345:2,10,13,19,20,24
<b>committing</b> 318:22	<b>computer</b> 280:18 284:12	<b>conducts</b> 243:15
<b>common</b> 129:12 291:25	<b>conceivable</b> 187:19 226:24 232:5 254:4 282:3 284:23 321:11 323:20	<b>confidence</b> 205:10 270:15 272:9 278:23 307:10 313:1,12
<b>communicating</b> 193:18	<b>conceive</b> 13:8 249:13	<b>confident</b> 136:23 293:25
<b>communication</b> 52:4 195:15 197:15 198:2 202:1 305:20	<b>concentrated</b> 34:19 132:13,16	<b>confirm</b> 86:5
<b>communications</b> 188:16,22 189:22 196:1,15 315:23	<b>concentration</b> 132:18	<b>confirming</b> 293:2
<b>comparable</b> 293:19	<b>concept</b> 26:13 48:18 87:21 88:25 165:7,12 177:15 187:7 255:1 261:20	<b>conform</b> 10:23
<b>comparative</b> 287:11	<b>concerned</b> 49:17 52:4	<b>confused</b> 73:22 255:11
<b>compare</b> 64:3 146:16 247:15 289:10	<b>concerns</b> 202:12,16 239:14 259:11, 13 269:22	<b>confusion</b> 253:11 257:21
<b>compared</b> 132:15	<b>conclude</b> 264:13	<b>conjoint</b> 31:10
<b>comparing</b> 64:11 174:21 260:12 292:9	<b>concluded</b> 38:23 347:6	<b>conjunction</b> 205:9
<b>comparison</b> 64:1 174:20	<b>concludes</b> 347:3	<b>connect</b> 75:23
<b>comparisons</b> 122:15	<b>conclusion</b> 16:19 19:8 20:5 22:1 23:25 33:9,12 37:25 38:11 42:19 44:2,23 48:21 49:4 69:16 190:12 191:8 201:17 244:2 259:8 264:22 266:4 314:23 316:19 324:7 325:4	<b>Connecticut</b> 3:8
<b>compelled</b> 107:20	<b>concomitant</b> 76:11	<b>consecutive</b> 80:21 207:6 209:8
<b>compete</b> 132:2 317:15	<b>condition</b> 202:10	<b>consequent</b> 129:2
<b>competition</b> 17:22 19:3 106:14	<b>conditional</b> 15:24 288:3	<b>conservative</b> 70:20
<b>competitive</b> 36:15 66:22 97:15 135:3 136:25 137:6,12,19 143:12 147:18 188:10 288:9 289:5,10	<b>conditions</b> 94:11 147:16	<b>considered</b> 70:16 79:16
<b>competitively</b> 32:14 36:5 56:23 58:25 59:20 60:14 68:7 133:19 155:8 229:20 248:7 300:12 318:1 320:5 346:9	<b>conduct</b> 9:10 19:20 23:23 24:4,13, 14,23 25:1,7,18,22 26:4,19 27:1,7,10, 14 28:10,14,20 32:5,6,8,12 33:23 35:15,21 36:9 37:1,6,11,16 38:9,15, 21,24 39:2,15 40:1,7,11,21 41:9 42:8, 10 43:6 46:16 52:7,19,23 54:19,23 55:3,8,15 56:6,20 57:13,16 58:16 59:7 60:23 62:8 64:2,13,25 66:6 69:5, 7 91:17,19,23 97:12 98:5 100:10,24 128:19 129:8,13 131:12 136:12 145:18,22 146:2 161:14 162:2,19 163:3,4 166:15 167:2,9 176:7,22 177:5,11 189:2,7 191:6 192:11,15 193:16 201:24 202:15,23 203:4,8 204:14 215:6 216:2,25 217:3 225:24 229:18,22,24 230:19 236:12 240:10 244:17,18 245:5,24 246:4,17 247:1,3, 15 248:8,9 249:2,3,18 250:9,10,18 251:5,9 253:16 254:8,14 255:12,13, 19,24 256:2,16,19 257:11 258:14,24 261:4 263:5,16,17 264:2,8,12,13 265:25 266:15 270:23 274:23 275:11 276:15 279:13 287:17,22,25 288:6 300:9,17 306:7 315:4,17 316:9 317:2 321:17 323:23 332:20 333:4 334:17 335:7,24 336:7 337:13,14 338:25	<b>considers</b> 33:2
<b>complete</b> 113:24 118:12 242:17 282:2	<b>consistent</b> 19:9 28:4,14 33:18 35:11 45:3 54:1 77:17 130:6 135:4 188:10 189:17 193:13 197:3 198:4 199:19 205:4 243:4 251:7 252:2 258:2,5 263:10,17,18 264:1,4,14 265:2 266:1 300:23 311:20 317:4 325:20 326:5 332:13,25 346:5	<b>consistently</b> 270:10 303:23
<b>completed</b> 16:5	<b>conspir</b> 52:9	<b>conspiracies</b> 33:1 57:16 198:10 250:11 251:11
<b>completely</b> 133:9 257:1,2	<b>conspiracy</b> 27:19 28:15 32:13,21 33:3,25 34:4,8,9 35:25 36:4 37:18,21 39:17 40:6 42:12,13,14,15,16,20 43:15 45:4 48:18 52:8,9 53:5,10,14, 18 54:3,6,10 56:14 61:14 66:14,21 68:19 69:2,14 70:13,21 101:8 108:13 117:4 128:15,20 130:2,3,10,20 133:12,21 135:8 136:3,10 161:15 174:21 188:2 190:19 192:4,23 194:12 197:5 198:23 200:15 201:5 203:9,14 205:5 214:3,10,12 221:23 225:4 226:15 229:11 230:4,9,21 240:1 244:9 247:20 249:8 250:4,17,19 251:2,8 252:5 253:17,22,23 254:11, 24 256:6,11,22 257:6 258:23 259:19 260:1 263:10 264:20 265:11,18 300:5	
<b>compliance</b> 300:19		
<b>complicated</b> 92:8		
<b>complying</b> 301:16		
<b>composed</b> 286:6		

323:7 325:12 332:14,25	
<b>conspire</b> 130:15 135:17,20	<b>control</b> 24:5,21 84:21,24,25 85:11,15 87:8 90:9,16,18,24 91:2 142:13,21 158:17,20,22 161:10,23 176:4,11,21 177:4 183:24 186:15 203:15 204:4,9,19 213:14 217:11,16 218:9 219:1 220:6,13,15 221:4 224:14 226:8 242:12,19 257:2 269:17 273:1,5 281:8 282:7,8,17 283:25 285:14,17 291:16 294:12 335:10 336:17
<b>constant</b> 246:6 279:25 280:4 301:3	<b>controlled</b> 89:22 91:12 104:25 138:20 154:13 156:14 157:16 159:5 161:6 234:19 298:7
<b>consternation</b> 340:7	<b>controlling</b> 162:3 177:12 184:8 255:25 270:2 281:17 292:15
<b>constitute</b> 188:6	<b>controls</b> 175:19 295:4,7 298:6,10
<b>constituted</b> 264:7	<b>conversation</b> 198:25
<b>constrain</b> 274:21	<b>conversations</b> 191:18
<b>constrained</b> 257:13	<b>convince</b> 336:15
<b>constraining</b> 251:4	<b>convinced</b> 309:23
<b>constraints</b> 249:1,16	<b>coordinate</b> 189:25 240:20 305:4 319:21
<b>construct</b> 57:22 255:12	<b>coordinated</b> 34:11 36:11 43:6 189:19 265:6 318:2 320:21 324:12
<b>constructed</b> 246:24 249:1 250:7	<b>coordinating</b> 34:23 46:10 47:17 50:14 197:15 201:19 258:7
<b>constructing</b> 186:2	<b>coordination</b> 34:25 35:15,16 36:1 39:10 40:10 45:19 46:4,13,15,17 58:24 70:18 136:15 191:21 258:8 259:5 320:17
<b>construction</b> 255:19 256:2 259:6	<b>corn</b> 87:11,12,15 286:7 287:1
<b>consulting</b> 328:6	<b>Corporation</b> 3:16
<b>consumer</b> 6:23 31:3	<b>correct</b> 8:1 40:8 52:17 55:18 70:8 80:3 82:16 89:18 98:1 105:6 106:17 175:18,22,24 183:10 213:12,24 222:3 240:17,22 245:11 246:7 249:5 281:24 282:13 285:20 297:14 300:9,21 301:1,11,25 307:16 316:6 318:22 322:14 330:22 345:6
<b>consumers</b> 176:8	<b>correctly</b> 91:20 270:12
<b>consumers'</b> 218:16	<b>correlated</b> 166:14 167:1,4 168:19 176:20 177:3 284:2
<b>consumption</b> 66:18 67:19 221:21 222:2,23,25 224:22 228:13	<b>correlations</b> 278:17
<b>contained</b> 187:24	<b>correspondence</b> 48:25 197:24 198:13
<b>contaminated</b> 64:12	<b>cost</b> 84:21,24 85:2,11,14,17,21 87:9,15 88:9 90:6,10,14,16,21 92:10 154:13,21 157:1 158:21 177:24 212:20,21 272:10 283:22 286:5,7,14,19,22 293:22 296:18,23 299:11
<b>contemplating</b> 133:18	
<b>contemporaneous</b> 184:19 185:14	
<b>contention</b> 199:12	
<b>context</b> 17:17 56:25 87:24 123:1 188:19	
<b>continue</b> 200:23 208:14 209:1 215:4 236:3 330:6,16 333:15	
<b>continued</b> 3:1 174:3	
<b>continues</b> 170:11 173:15 207:4 217:1	
<b>contract</b> 4:11 121:7 165:24	
<b>contracted</b> 88:14	
<b>contracting</b> 168:14	
<b>contraction</b> 166:3 168:1	
<b>contribute</b> 344:4 345:19	
<b>contributions</b> 92:13	
	332:4,7 346:7
	<b>costs</b> 85:18 87:11 88:18,23 90:2 92:14 94:25 154:6,20,24 155:7 156:19 158:25 159:3 176:11 271:25 272:3,5 285:14,17,25 286:8,11 287:6
	<b>council</b> 231:16,19,21 234:1
	<b>counsel</b> 20:25 21:2,10 22:24 33:14 95:20 96:6,11 163:20 252:10 290:6,17 305:21 341:16 342:4
	<b>count</b> 7:5,6,9 9:14
	<b>counted</b> 6:15
	<b>counterfactual</b> 155:9 156:17
	<b>countervailing</b> 282:5
	<b>countries</b> 221:5,10 226:21
	<b>country</b> 221:13
	<b>couple</b> 341:11
	<b>court</b> 5:13 22:8,11,24 23:7,8 26:7,8 28:23 29:8,20 30:1,8 69:22 119:9
	<b>Court's</b> 20:21 38:4
	<b>cover</b> 175:11
	<b>coverage</b> 156:6
	<b>covering</b> 173:25
	<b>covers</b> 6:23 88:22 280:15
	<b>COVID</b> 273:5,9,10,16,25 274:7
	<b>Craig</b> 3:19 84:8 151:12 153:22 245:12
	<b>craig.coleman@faegredrinker.com</b> 3:20
	<b>create</b> 344:9 345:9
	<b>created</b> 116:9 152:14 331:21
	<b>creates</b> 273:11
	<b>creating</b> 304:20
	<b>crime</b> 49:19
	<b>crimes</b> 49:20
	<b>crisis</b> 239:13,21
	<b>criteria</b> 30:23 53:22 193:13 198:9 204:22 205:3,8 266:2,6,7 299:7 317:3 325:13,14 326:6
	<b>CROSS-EXAMINATION</b> 4:3 342:20
	<b>crosstalk</b> 14:22 93:6 100:15 112:19 145:2 179:6 196:4 232:14 242:14 253:9 269:4 339:5

**cuing** 88:3  
**cull** 10:5 241:25 242:25  
**culling** 241:23  
**culls** 242:3  
**currency** 220:6 222:17  
**current** 122:12 126:16 305:17  
308:23 309:1 319:7  
**curve** 66:23 67:6 284:2  
**customer** 270:5 276:21 281:1,6,10,  
16,25 282:3,10,12  
**customer-type** 280:2  
**customers** 318:19  
**cut** 95:7 96:1 178:16 179:19 181:10  
259:24 268:2,17,25 270:2,18,22  
272:14,22 273:24 274:17,24 275:4,8  
280:15 281:19 284:21 292:2,6,11,12,  
15,17 293:10 295:23 296:1,3 299:24  
308:6 313:5 316:14  
**cut/type** 294:25  
**cutbacks** 103:5  
**cuts** 179:10 269:16 270:2 272:12  
273:23,24 274:5,22 275:9 284:24  
**cutting** 97:3  
**cycle** 165:8,13 167:14

## D

**D.C.** 3:8  
**damage** 18:25  
**damages** 8:14,25 10:4,8 13:25 14:5  
16:4 17:19 18:4 20:16 21:3,11 22:25  
23:17 24:5 291:1,4 335:6  
**dangerous** 318:24 319:5  
**DANIELS** 3:16  
**data** 12:21 13:11,18 47:22 48:1,3,4,  
13 85:6,10 86:6 87:6,7,8,10,11,18  
90:8 98:25 106:8,20,22 108:11  
117:15 119:13 122:15 124:17 125:19  
132:20 150:4,10 170:18,20,24  
171:14,17,20 173:24 174:1,4,8,15  
175:3,5,11 177:14 181:14 182:17  
184:21 185:12 186:24 187:13,24  
228:17,23,25 229:1,6 269:15 272:25  
276:9 278:18,19 279:16 281:7 285:18  
287:2 289:22 295:21 296:12,16,21  
309:4,9 312:1 313:17,18 333:18,23  
343:16,25 344:2,12,24 345:19

**database** 187:18 299:23  
**date** 109:10 121:22 174:15 175:1  
334:25 335:7  
**dated** 175:6  
**dates** 171:17 330:10  
**dating** 170:5,25 213:8  
**Daubert** 16:16,21,25 20:3 21:23  
22:17 29:8,10,22  
**day** 75:3 81:7,20,22,25 262:15  
**day-to-day** 300:13 305:24  
**days** 261:24 262:3,10 342:12,13  
343:5  
**de-anonymization** 311:2  
**de-anonymize** 309:4,15,19 310:24  
311:8,16 312:4,20 313:21  
**de-anonymizing** 310:8 311:13  
313:9,10 314:11  
**dealing** 25:21 27:18  
**decades** 41:15 153:7 167:13  
**decide** 146:21 147:1  
**decided** 11:19 153:14 264:18  
**decides** 91:22 141:5  
**decision** 10:19 25:4,15,17 26:23,24  
34:10 38:5 39:7,10 46:11,17,22 50:16  
51:15 52:5 54:11 60:3 81:8 91:14  
93:14,21 97:13 134:15 137:5,15  
138:3 141:6 143:4 147:5,9,11,15,20,  
23 185:8 188:1,5,8 189:18 190:3  
193:19 197:16 255:3 256:9 265:5  
290:19 318:3 322:8,23  
**decisions** 31:12 47:18 142:5 146:5  
190:1 201:20 203:15 204:5 242:25  
258:7 260:25 261:9,12,17 320:22  
324:13  
**decline** 159:18 240:25 241:5,16  
**declined** 10:10,15 11:5,18 134:3  
214:7 216:1  
**declining** 157:8  
**decomposed** 163:4  
**decomposition** 61:15 62:9,13,16  
63:18,19 65:2 84:5 162:18 215:19  
230:13  
**decrease** 65:23 157:21 159:10 195:5  
**decreased** 96:24 158:2 162:8  
231:12

**decreases** 65:25  
**decreasing** 221:5  
**deemed** 29:7 91:17  
**Deese** 145:4  
**defend** 226:7  
**defendant** 7:14,16,20 19:1,3 29:15  
45:10 49:1 50:20,21 51:19 72:5 74:24  
100:2 101:17 103:6 127:4 132:2  
149:10 150:2 181:14 188:22 191:18  
193:8 194:5 195:17 198:25 201:22  
229:13 231:11 232:21,23 236:8  
238:14 240:17 248:11,14 261:12,23  
262:4,9 264:18 265:9 268:21 272:13  
274:17,24 275:18,23 278:18 280:1  
281:13 282:9,10 295:23,25 318:6  
321:1 322:7,17 323:1,14 344:21,24  
345:14 346:1  
**defendant's** 188:1 255:3 281:11  
318:11  
**defendant-specific** 275:18 344:7,  
11  
**defendant-to-defendant** 195:15,  
25  
**defendants** 17:21 21:7,14 23:16  
34:1 35:16 39:3 43:23 44:8 45:18  
46:1,10,20 47:8,17,20,23 48:5 49:15,  
20,24 50:13 52:3,25 55:10 56:5,13  
57:3 60:15 61:20 62:11 65:4,23 67:9,  
25 68:8 71:25 72:5,22 73:9 74:7 76:1  
77:11 79:21,22 83:24 85:7,12 96:25  
98:11,21 99:14,16 101:10 127:13  
128:4,19 129:4,11 137:3 143:8,16  
148:4 149:12,15 150:9 169:9 189:25  
190:8 191:12 192:9 193:21 196:15  
200:2 211:7 214:16 216:5 228:2  
229:21 231:1 233:7 234:12 236:11  
240:16 250:3 253:13 256:9 261:17  
265:19 272:20 274:22 275:25 278:21  
281:21 289:22 302:16 305:4 306:2  
307:20,21 308:24 309:15 311:15,22  
313:24 316:3 318:9 319:21 320:4  
322:22 323:5 327:5,18,24 333:7  
**defendants'** 25:25 39:7 187:12  
192:21 228:25 229:1,5 264:11  
296:12,16 340:16 344:2  
**defense** 20:24  
**deficiency** 27:21  
**define** 34:3 38:9 69:7 126:24 174:12  
181:21  
**defined** 34:8 55:3 58:17 81:13 109:5  
118:14 120:17 176:21 177:4 206:7  
334:14

<b>defining</b> 207:16	<b>designed</b> 53:11 84:21,24 198:3,9 206:12 222:1 272:17	<b>discuss</b> 163:19 180:11
<b>definition</b> 34:6,9 37:2 55:14 56:6 65:22 66:7,10,11 111:21 122:25 138:1 165:10 178:14 226:23 227:1 228:11,15,21 229:9 290:2,5	<b>designing</b> 264:24	<b>discussed</b> 163:23 198:14 262:6 316:8,11
<b>definitional</b> 126:23	<b>detail</b> 29:5 43:19 47:5 115:9 116:11, 23 319:19	<b>discussing</b> 73:21
<b>definitions</b> 108:19 122:13	<b>detailed</b> 315:19	<b>disease</b> 219:18
<b>definitively</b> 263:12	<b>details</b> 62:25 310:15	<b>diseases</b> 105:2
<b>delay</b> 115:20 116:7	<b>detecting</b> 278:17,18	<b>dislocations</b> 273:11
<b>deliberate</b> 238:16 240:19 264:19	<b>determination</b> 11:13 13:24 14:4 264:6	<b>dispositive</b> 217:2 339:25
<b>deliberately</b> 148:8	<b>determine</b> 28:24 192:1,20 197:21 290:8	<b>disprove</b> 332:20 333:5
<b>deliver</b> 103:14	<b>determined</b> 109:8 126:18	<b>dispute</b> 23:20 127:1 155:24 156:2 157:13 159:8 160:14,17 209:13
<b>delivering</b> 64:17	<b>deviated</b> 302:13 303:9 304:11	<b>disputed</b> 199:20
<b>delivery</b> 75:15 109:10	<b>deviates</b> 302:11	<b>disrespectful</b> 233:16
<b>demand</b> 66:23 67:6 157:3,7 175:21 176:12,16 216:5,18 217:7,16 219:14, 19 220:19 221:15 222:18,20 267:9 284:2	<b>deviating</b> 275:24	<b>dissemination</b> 300:12
<b>demonstrating</b> 225:20	<b>deviation</b> 303:17	<b>distinct</b> 46:15 71:19 180:16 181:18 337:19
<b>denied</b> 313:6	<b>device</b> 32:16	<b>distinction</b> 181:20
<b>deny</b> 222:16 312:14	<b>dictate</b> 325:24	<b>distinguish</b> 19:19 24:13 27:24 201:14 226:11
<b>depart</b> 255:18	<b>difference</b> 114:5 177:23 277:1 288:2 289:4,11 293:13 309:13	<b>distinguished</b> 149:3
<b>Department</b> 122:8 223:8,19	<b>differences</b> 297:4 335:9	<b>distinguishing</b> 201:3
<b>dependant</b> 334:1	<b>differential</b> 250:15 294:18	<b>distress</b> 154:10,17 155:19
<b>dependent</b> 202:20 215:13	<b>differently</b> 251:13 334:24	<b>distributed</b> 308:24
<b>depending</b> 19:12 90:6 276:10 280:24	<b>difficult</b> 160:5	<b>distribution</b> 297:5 307:6,9,14
<b>depends</b> 25:20	<b>dig</b> 13:17 14:11 16:14	<b>distributor</b> 277:3 292:9,12 299:17
<b>depicting</b> 179:25	<b>direct</b> 4:3 5:20 6:7 48:18 81:15 176:8 188:16,22 198:2 201:18 202:1 248:22 249:11 276:2,10,11,13,23,24 277:2,6, 9,13,16,23 280:4 281:6 285:21 291:7 293:20 294:15 297:9 298:19 299:12, 25 315:23	<b>distributors</b> 295:17
<b>depiction</b> 164:14	<b>directed</b> 266:25	<b>diverged</b> 159:4
<b>deposition</b> 5:6 20:24 21:8,17 58:19 199:2 341:12,22 342:10 347:4	<b>direction</b> 54:1 266:8 311:19	<b>division</b> 236:21
<b>depth</b> 106:17	<b>directly</b> 50:13 126:18 148:3 193:18 344:3	<b>divorced</b> 26:24 188:12
<b>derived</b> 263:4	<b>directs</b> 291:15,21	<b>document</b> 18:22 20:9 46:19 47:7 50:5 51:18 106:1 113:15,17 114:13 117:18,20 118:11,20,24 141:1 152:14,23 153:17,25 160:1 164:3,6 194:8,15,17 195:13 198:20 213:17 223:12 232:4 233:1 239:7 240:12 241:8,10 265:8,14 329:1,4,6,18 330:11,15,21 331:10,15 333:9,14,16
<b>derives</b> 198:8	<b>dirty</b> 64:11	<b>documented</b> 315:22
<b>describe</b> 8:23 58:15 90:22 103:22 148:24 177:21	<b>disagree</b> 20:21 31:11,16,18 126:22 141:10	<b>documents</b> 48:24 153:1 198:19 230:3 238:20,23 265:16 302:2 304:13 305:2 313:19 316:23 342:14
<b>describes</b> 50:12 66:9 322:22	<b>disagreed</b> 22:5	<b>DOJ</b> 30:24
<b>describing</b> 64:9	<b>discount</b> 285:12	<b>dollar</b> 206:1 222:17
<b>description</b> 4:8 187:21 269:21 286:2	<b>discovering</b> 10:17	
<b>design</b> 251:6		

**dollars** 253:14 332:24  
**domain** 18:2 326:3  
**domestic** 40:18 42:21,22 43:3,15,24  
44:10 45:5,23 52:25 53:8,12,13  
54:14,20 55:11 56:9 58:21,22,23  
59:17,18,19 61:12,20 62:11 65:4,8  
66:1,19 70:25 71:12,13 72:23 77:11  
80:7,16 101:8 102:20 157:4 189:15  
190:20 191:4,13 193:1 194:7 195:5  
196:12 197:11 198:4 201:8 202:20  
203:11 210:22 211:24 214:16 215:20,  
22,25 221:8,20,21 222:2,22,25  
224:22 226:9 228:13 229:5,6 256:8  
317:7 324:17,18  
**domestically** 72:1 208:5 221:16,17  
223:10,20  
**donor** 29:18  
**dots** 75:24  
**double** 345:16  
**doubt** 42:3  
**Doug** 196:7  
**downside** 241:2  
**downward** 171:24 174:3 330:6  
335:22  
**dozens** 37:1  
**dramatically** 253:16  
**drawdown** 338:20  
**drew** 42:2 316:22  
**Drive** 3:12  
**driven** 98:7  
**driver** 321:2  
**driving** 279:13  
**dropped** 279:6  
**dropping** 304:3  
**drops** 219:18  
**drought** 219:18  
**dug** 12:21  
**duly** 5:17  
**dummies** 274:24,25 280:24  
**dummy** 156:14 157:17 158:15 161:6  
185:6 229:18 245:9 281:17  
**DUNN** 3:7  
**duration** 103:2 250:17 251:9 253:2

**E**

**e-mail** 196:7 262:13  
**earlier** 41:5 122:15 175:11 188:15  
244:8 283:11 295:25 298:10 331:9  
**early** 171:8,18 252:14  
**earning** 177:19  
**easier** 7:12 110:25 342:11  
**easiest** 246:14  
**easily** 138:25 313:25  
**East** 150:20  
**Eastern** 5:5  
**eat** 163:24  
**econometric** 57:6 84:20 91:12  
97:10 202:17 203:25 205:9 214:4  
252:9 270:25 274:20 276:6,18  
**econometrician** 219:10  
**econometrics** 251:21 269:14 271:2,  
7,12  
**economic** 16:24 17:18 19:18,25  
20:1,15 21:1,9,21,22 22:14,15 23:10  
24:11,19,23 25:5,16 26:8,16,17,25  
28:5 30:23 34:5,8 35:3,6 38:22 45:2  
53:20 62:23 63:24 64:7 68:16 88:25  
95:25 146:12 156:9 192:22 198:7,8  
203:25 204:2,3,23 236:25 237:4  
252:9 266:2 276:6,12 290:7 317:3  
319:13 325:7,14,15 326:6 337:20  
346:6  
**economically** 92:2,19,22 95:6  
138:22 172:20 178:15 192:2 202:14  
203:15 204:5 242:25 335:2  
**economics** 24:15 92:7 122:8 177:23  
197:25 198:1 240:13,18 251:20  
**economist** 24:3 34:17 35:7 68:5  
92:14 140:14 157:20 161:22 173:5,8  
254:12 266:7 306:5,10 326:10,13  
**economists** 32:24 53:22 173:2  
193:14 198:9 258:21 319:11 325:18  
336:20  
**economy** 41:18  
**edge** 70:16  
**effect** 24:3,25 63:5,6 64:24 65:2  
67:18,20 68:11 70:20 76:11,12 80:12,  
15 99:11 102:15 138:25 149:2 162:18  
163:2 167:8 171:16 176:7 182:10,13,  
18 184:13,16 186:13,19 203:7 211:6

212:25 214:2 217:3 223:25 247:2  
250:5,8 251:2 254:14,21 255:24  
256:18,21 257:10 279:18 280:9  
281:7,15 282:20,24 284:7 293:6  
306:23 319:14 321:16 336:6 339:6  
340:3  
**effectively** 176:19  
**effects** 13:13 41:7 53:25 57:15 66:25  
67:5 70:17 97:9,11,17 98:4 102:9,22  
130:2,3,5,9,11 131:14 133:14 202:23  
204:13 216:4 225:21 239:12 250:15  
270:3 278:25 279:4,25 280:3,18,21  
281:2 284:6 306:12,20 321:14 338:1  
344:7,11,17,21 345:11,14,21,22  
346:1  
**effectuate** 56:14 68:9 142:15  
**effectuated** 306:19  
**effectuating** 130:11  
**efficiency** 26:2 27:3,7 172:18 276:8  
282:19 283:7,12,21  
**effort** 28:18 209:14,18 264:20 309:18  
311:7,15,18 324:16  
**efforts** 183:8 302:6 313:23  
**eggs** 29:18  
**elasticity** 216:4  
**element** 16:8 18:1 55:7 63:7 136:17  
**elements** 325:17  
**elevate** 66:21  
**eliminate** 41:6 104:20  
**eliminated** 43:10 60:21 191:11  
290:1,18  
**ELLIS** 3:12  
**embrace** 126:4  
**Emeritus** 121:23  
**EMILY** 3:20  
**emily.chow@faegredrinker.com**  
3:21  
**empirical** 214:1  
**empirically** 266:12  
**employ** 325:15  
**employed** 61:20 77:10  
**encounter** 219:9  
**encourage** 212:16  
**encouraged** 210:22

<b>encourages</b> 106:14	<b>equation</b> 245:22 270:15 282:9	<b>examples</b> 10:5 240:8
<b>end</b> 10:20 11:13 13:23 28:22 160:9 173:13 195:24 196:12 198:5 200:7 214:8 240:23 245:8 249:7 274:15 346:8	<b>errata</b> 4:4 342:23,24 343:6	<b>exceeded</b> 160:7
<b>endeavored</b> 193:23	<b>erroneously</b> 156:7	<b>exceeding</b> 209:10
<b>endogeneity</b> 219:10	<b>error</b> 32:3 192:6 269:11	<b>Excel</b> 305:15
<b>endogeny</b> 337:2	<b>errors</b> 32:1	<b>excerpts</b> 195:24
<b>ends</b> 235:25 236:1	<b>escaped</b> 272:14 275:8 277:24 288:23 289:18	<b>excess</b> 20:17 225:23
<b>enforce</b> 302:7	<b>ESQUIRE</b> 3:5,9,14,19,20	<b>exchange</b> 32:14,16 36:15,16,18 37:22 39:18 53:2,7 57:10,23 248:4,6 308:12 317:25 318:9 319:3,14
<b>enforcement</b> 301:9,17 302:3,10,21 303:13 304:5,10 309:3	<b>establish</b> 18:6 19:15,22	<b>exchanged</b> 318:1
<b>engage</b> 93:14 151:25 315:16 316:9 319:13	<b>established</b> 35:24 42:11 83:15 143:13 168:8 206:21 334:4	<b>exchanging</b> 68:6
<b>engaged</b> 148:16	<b>establishes</b> 331:16	<b>excited</b> 154:12 156:13
<b>engagement</b> 10:11,17	<b>establishing</b> 215:15	<b>exclude</b> 27:10 203:14 204:4
<b>engagements</b> 10:15	<b>estimate</b> 6:17 7:8 8:8 10:19 16:3 18:4 21:13 70:20 98:6,20 103:1 126:7 160:19 193:24 227:8 242:9 243:18,21 250:8 290:25 294:9 295:10 337:25 341:24	<b>excluded</b> 20:18 23:9 30:5,8
<b>engaging</b> 26:3 129:12	<b>estimated</b> 8:9 14:6 61:11 62:5 156:10 249:21 288:14 295:20	<b>exclusion</b> 20:3 21:23 22:17 30:16
<b>engendering</b> 337:1	<b>estimating</b> 24:5 57:14	<b>exclusions</b> 29:9,10
<b>enhanced</b> 146:18	<b>estimation</b> 64:24	<b>exclusive</b> 124:11 135:24
<b>enhancements</b> 285:4	<b>evaluate</b> 131:7 251:16 269:25 270:25 296:4 302:20	<b>exclusively</b> 214:13 266:4
<b>enjoyed</b> 146:15	<b>evaluated</b> 25:16	<b>executives</b> 322:2
<b>ensnare</b> 312:12	<b>evaluation</b> 270:7	<b>exercise</b> 25:24 143:15 145:24 152:1 226:2 243:20
<b>ensure</b> 313:20	<b>event</b> 183:8 310:18	<b>exercises</b> 270:21
<b>enter</b> 220:1 286:21	<b>eventually</b> 103:20 272:3 323:24	<b>exercising</b> 143:25
<b>entered</b> 270:9	<b>evidence</b> 29:2 30:22 33:17 35:8 43:5 45:3,17 46:8,25 47:3 48:18 49:14,22 50:12,19 51:12,24 53:24 66:9 67:25 70:9 77:18,25 78:15 141:16 143:14 168:5,18 188:2,14,15 189:17 191:16, 20 193:13 197:4 199:19 200:1,8 201:18 202:1,2 203:13 205:2,4 211:5 238:13 247:25 254:10 258:1,5,6 260:24 263:9,13,25 264:3,6,12 265:1, 22 266:1,5 302:15,24 304:4,6 310:5 311:20 314:16 315:13 316:7 317:2,4 321:21 322:12,16 326:5,10 328:12 335:19 340:15	<b>EXHIBITS</b> 4:8
<b>enters</b> 270:13 337:3	<b>exact</b> 112:20 117:11 174:14 194:17	<b>exist</b> 9:3 76:17 136:5
<b>entire</b> 107:12 258:19	<b>EXAMINATION</b> 4:3 5:20	<b>existed</b> 44:21 45:8 136:5 300:6 302:8 303:10 340:6
<b>entirety</b> 247:3 249:17 250:9	<b>examine</b> 10:7 294:18	<b>existence</b> 9:22 33:15,18 44:4 53:18, 19 54:2,3 158:16 161:14 198:23 205:4 253:5 314:21 315:4 317:4
<b>entities</b> 111:22	<b>examined</b> 5:18 168:24 169:3	<b>exists</b> 33:20 86:15 199:13
<b>entitled</b> 21:6 23:14 121:6		<b>expand</b> 165:22 167:15,19 208:21 255:5
<b>entity</b> 112:3		<b>expanded</b> 330:12 333:10 335:14
<b>entry</b> 101:24		<b>expanding</b> 101:16 103:4 138:8 168:13 171:2 172:21 330:18
<b>environment</b> 64:12,13 157:18 159:10 160:21 161:16 188:10		<b>expands</b> 255:21
<b>episode</b> 22:20,23 47:16 72:3 154:23 157:1 256:17 303:15		<b>expansion</b> 166:3 168:1 210:22 252:12 256:17 329:9 330:5,16 333:15
<b>episodes</b> 39:9 261:17 302:12 304:12 321:7 332:19 336:5 340:17		
<b>Episodically</b> 262:8		
<b>equal</b> 57:17,25 167:3 255:13 271:21 338:15		

**expect** 157:20 159:9 173:14 184:13  
216:19 268:10 269:6,7 273:15 335:8  
340:5,13

**expectation** 314:9

**expected** 195:4 267:3 271:15,24  
273:4,19 338:5

**experience** 8:2,3 13:10,15

**experienced** 272:23

**expert** 4:9 6:1,14 10:3 11:6 14:10  
17:3,18 23:20 25:25 27:6,20 86:10  
173:10 215:17

**expertise** 8:13,16,18,20,23 12:9,14,  
17 14:12

**experts** 207:6 333:25

**explain** 27:6 33:1 42:9 54:18 65:17  
141:19 166:19 167:8 184:9 185:19,22  
186:7 246:8,14 253:20 278:13 279:10  
280:8,16 282:21 284:10 335:11

**explained** 21:1 24:22 109:1 168:6

**explaining** 183:22 184:21 185:16  
186:23

**explains** 65:21 131:12 182:17

**explanation** 27:10

**explanations** 28:19 173:9

**explanatory** 185:12 187:4 212:22  
276:9

**explicit** 35:16 36:1

**explicitly** 20:25 34:13,14,22 91:11  
157:16 158:21 219:15

**exploit** 320:4,10

**exploits** 321:10

**explosive** 305:19

**export** 39:11 46:11,22 47:18 48:7  
51:14,25 188:1,9,25 189:5,18,24  
190:1 191:22 192:1 193:8,19,24,25  
196:9 197:8,16 201:20 202:24 207:4,  
10 208:2 214:10 217:13 222:6 223:9,  
16 224:21 226:17 227:7 228:3 229:12  
239:14 240:20 324:14,19 325:1

**exported** 47:24 48:14 194:6

**exporter** 208:16

**exporters** 209:3

**exporting** 39:12,21,22,24 40:2 41:6  
42:25 43:7,9 45:21,22 46:9 52:5  
54:12 56:12,16 60:6,11,19 63:2 71:20  
188:17 189:11,13,23 190:3,10,16

191:10 193:23 214:13,15 222:2  
238:15

**exports** 39:3,8 40:13,15,24 41:2,13,  
22,25 42:17 46:4 47:9,14 48:3,4 49:2,  
16,25 50:16,22 52:1 53:15 54:7,22  
55:1,7,14 63:12 64:18 65:15 66:14  
134:11 188:23 189:6 190:25 191:4,  
19,21 192:14,21,25 193:5 195:4,16  
196:1 197:7,9 199:1 200:14,21,22  
201:4,5,6,14 202:4,14 203:1,7 207:23  
208:4,21 209:7,8 210:1,12,21 211:3,  
23 213:6,11,19 214:2,7,25 215:9,12,  
13 216:8,14,19,23 217:4 218:1,2,7  
221:20,24 222:12,13,22,24 223:20  
224:9,24 225:5,9,11,19,22 226:12,14,  
17,20,25 227:4,8,11 228:18 229:2,3,  
7,10 230:13 238:12 239:17 240:25  
241:6,16 250:20 259:13,14 283:1

**expressing** 338:8 340:6

**extended** 136:3

**extent** 40:18 45:8 62:6 66:20 70:15  
95:10 96:23 103:8 104:23 129:10  
131:7 133:11 135:1 142:14 143:3,6  
147:17 149:13,18 150:2 161:21  
170:11 171:23 173:24 203:4 244:11  
272:5 273:10 279:12 282:5 283:24  
292:5 314:25 318:24 327:13

**extreme** 154:10,16 155:18,25

---

**F**

**face** 226:6

**faced** 156:18 216:5

**facilitate** 230:4 264:20 265:11 306:8  
314:11 319:9

**facilitated** 255:15 318:2 320:21

**facilitating** 32:16 304:16 324:11

**facing** 237:7

**fact** 16:2 17:20 18:25 20:23 39:9  
45:19 47:2 86:4 106:2 112:24 118:12  
119:20 133:18 142:17 143:25 144:13  
160:5 166:23 167:12 180:24 184:24  
188:8 190:23 197:23 202:5 204:14  
205:7 214:18 217:1 223:17 228:1  
234:11,22,24 241:5 254:16 256:16  
270:13 280:14 288:20 289:14 302:14,  
24 309:1,24 331:11 333:3 337:6  
338:3 339:19,22 344:13 345:1

**factor** 19:2

**factors** 17:21 24:6 28:16,22 29:2  
53:21 177:13 200:9 204:22 219:19

222:5,11 242:19 246:5 274:9

**facts** 4:12 12:21,22 17:3,6 24:24  
74:17,20 78:22,23 79:5,12,15 137:1  
152:15 160:14 188:12 330:14 335:19

**factual** 20:14

**FAEGRE** 3:16

**fail** 73:10

**failed** 24:21 72:23 73:6,9 74:8 203:6

**fair** 9:4 40:12 41:17 72:16,20 83:2  
85:5,13 90:13 93:22 107:8 109:21  
124:8 137:25 165:5 191:5 197:6  
198:12 199:2 217:10 240:22 297:7  
313:15 314:13 322:24

**fairly** 207:19 282:22 283:2 291:24  
293:25

**faith** 269:18 270:20

**fall** 39:24 66:18,19 254:23 329:12,13

**fallen** 94:24

**falling** 91:8 258:12

**familiar** 18:18 48:17 57:1 64:7 87:21  
121:9 139:24 140:2,5 152:19 165:7,  
11,18,20 166:2 167:12,20 177:15  
178:2 216:2 220:11 227:21,23 228:1

**familiarity** 168:2

**farm** 75:11 81:12,16 82:8,16 94:6  
97:23 137:5 223:18 224:6 324:24

**farmer** 90:11 93:1 173:3

**farmer's** 94:24 147:11

**farmers** 134:5 143:20 144:1 146:19  
147:20 165:22 167:15,18 172:6  
210:13 212:17

**farms** 72:9,10 74:3 75:2 81:7 82:12  
99:6 104:8 127:19 128:17 132:8  
146:23 160:25 162:24 164:15 210:23  
212:9

**farrow** 141:7 142:7

**farrow-to-finish** 164:13

**farrowing** 72:14 102:4 329:10

**farrowings** 93:15 94:19 138:9  
162:23 329:13

**fashion** 282:24 283:4,17

**fast** 81:25 215:5

**fatter** 81:7

**favorite** 249:19,23

**feasible** 14:5  
**fed** 72:18  
**federal** 9:18  
**feed** 154:6 172:18 286:6,12  
**feedback** 212:25  
**feel** 11:14 34:21 38:3 63:19 136:22  
150:21 151:14 164:1 170:12 202:25  
204:17 205:3,11 264:5 310:1 345:4  
**fell** 214:18 215:23 254:20  
**felt** 13:13  
**female** 103:13  
**fewer** 65:24 76:2 91:22 93:14,15,21  
94:6,19,20,21 172:18 289:19  
**Fieri** 154:1  
**Figueroa** 3:25 5:9  
**figure** 45:10,18,20 46:1 102:19  
112:25 114:2 135:4 138:19 143:18  
144:17,19 146:14,17 192:8 215:25  
310:19,20 317:1 328:7  
**figures** 166:11 215:22  
**figuring** 133:23  
**filed** 29:24 30:3 114:25  
**fill** 305:16  
**filled** 115:10  
**filling** 137:7,22  
**final** 12:15  
**finally** 346:2  
**financial** 154:10,17 155:18,25 162:8  
**find** 39:6 108:13 127:10 265:14,16  
305:19 312:24 313:1 321:11  
**finding** 13:10 93:13  
**finds** 308:8  
**fine** 14:18 58:12 100:20 149:25  
151:11,13,20 158:8 184:1 331:4  
**finish** 158:6 232:17,18  
**finished** 286:20  
**firm** 26:18 89:2,25 134:19 137:11,20  
138:2 201:21 301:15,23  
**firm's** 203:16 204:6  
**firms** 34:21 36:9 43:3 45:10 202:3  
258:7 313:1 324:20 326:11 338:4  
**first-time** 214:6

**fits** 55:14  
**fix** 60:10  
**fixed** 92:14 270:3 279:24 280:2,9,18,  
21 281:2,15 284:5,7 344:7,11,17,20,  
21 345:11,14,21 346:1  
**flag** 218:13  
**flat** 40:15  
**flip** 159:25 273:3  
**flow** 8:25  
**flowed** 55:8  
**flown** 261:2  
**flu** 156:7 157:2 218:12,25  
**fluctuation** 222:18  
**fluctuations** 220:7  
**FMD** 239:12,21  
**focus** 43:9 119:20 140:14 183:19  
**focused** 64:3 90:10 258:24 299:3,5  
334:21  
**focuses** 297:11  
**focusing** 184:9 236:14  
**follow** 125:16 176:25 179:8  
**follow-on** 345:4  
**follow-ons** 346:18  
**food** 3:11 121:14 277:2  
**Foods** 3:2,7,16  
**fool's** 192:6  
**footnote** 145:4,9 153:2,4 231:24  
233:6 329:5,18,22  
**forces** 98:7 148:2  
**forecast** 240:25 241:14,15  
**foreign** 197:10 201:7 217:16 218:20,  
24 219:1,17,24 220:3 221:10,15  
222:18,20 230:7  
**forget** 29:16  
**form** 9:24 10:14 14:15 17:10,13,24  
19:21 23:25 24:16 25:8 26:20 28:6  
33:6 38:10 41:16 42:18 44:2,20 45:14  
48:9 50:1,6 52:12 53:16 54:8,24  
55:16 58:4 61:8 62:2 65:19 68:3,21  
69:15 70:6,13 71:7 75:4 76:19 77:3  
79:20 88:20 92:4,24 93:16 94:8 96:2  
97:25 98:18 100:12 107:24 108:8,12  
112:13 117:16 123:24 129:21 130:18  
134:6 135:12 136:8 137:24 138:13

140:16 141:12 144:8 146:24 148:6,18  
149:16 155:4 157:22 159:13 161:2  
165:25 167:21,24 168:15 172:23  
178:5,17 182:3 189:9 190:11 191:7  
193:10 199:3 200:4 203:18 204:7  
208:6,23 209:15 210:3 212:10 213:16  
214:11 217:9 219:21 222:7 224:10  
225:17 228:8 230:10 233:5 234:21  
237:2,13 244:1 252:16 263:8,21,24  
274:11 302:9 304:17 306:3 314:14  
315:18 317:21 320:18 321:4 322:11  
323:17 325:3 328:9 329:14 333:12  
335:18 336:25 338:12 340:11  
**formative** 314:17,19 315:15  
**formed** 49:6,8 61:4,23 62:18 68:19  
69:2 73:18,20 75:8 77:6 78:18 79:7,9  
81:2 146:8,11 328:18  
**forming** 79:17 86:21  
**forms** 304:1  
**formula** 110:18,19,20 111:9,10  
123:7,10 126:15  
**formulas** 115:16  
**forward** 16:5 51:25 63:10 175:17  
194:13 220:23 226:5 311:19 328:12  
**found** 145:3 187:3 275:8 279:17  
**foundation** 45:15 68:22 75:5 76:5,  
20 83:8 109:17,22 112:14 126:2  
132:24 134:18 140:17 141:13 146:25  
155:21 172:13 208:7,24 209:16  
223:23 310:11 316:20 330:14 331:2  
332:11  
**fracture** 338:3  
**frame** 160:16 173:22 247:7  
**frankly** 192:16  
**free** 151:14 345:4  
**Fresh** 295:16  
**fresher** 242:2 243:24  
**front** 10:20 11:13,19 13:23 23:5  
**FTC** 30:24  
**full** 29:10 166:22 173:25  
**fully** 126:4  
**function** 82:2,24 219:25 301:21  
**functioned** 311:14 340:9  
**fundamental** 312:22  
**fundamentally** 175:19 339:14  
**funds** 206:6

**future** 182:12 305:17 312:12

---

**G**

---

**gain** 81:20

**gains** 21:7,13 23:15 166:12,24  
172:18

**gap** 137:7,23

**gather** 180:9 300:17

**gave** 66:11 138:19 278:23

**GDP** 217:25 218:3 271:15

**general** 168:24 203:23 223:14  
270:15 282:17 296:8

**generally** 8:22 161:1 218:1,2 265:16  
302:17 338:23

**generate** 76:10

**generates** 63:5

**generating** 287:2

**generic** 21:4,7,14 23:16

**genetic** 172:18

**genetically** 153:8

**genetics** 242:2 243:24

**gently** 337:18

**GIBSON** 3:7

**gilt** 103:12,25

**gilts** 103:16 104:8

**give** 7:7 14:18 25:11 34:5 35:18  
37:10 55:13 64:23 68:23 74:10 77:4  
87:24 93:23 103:1 104:4,10 105:8  
117:10 149:7 162:14,16 165:10 168:4  
172:15 198:18 206:8 211:17 240:3  
244:22,24 261:16 269:20 291:8  
301:13 303:12 307:9 310:14 327:14  
342:12 343:19

**giving** 64:22 280:10 303:20 308:3,5

**glad** 159:4 196:8

**Glance** 4:13 152:16

**Glenn** 121:7,22

**glosses** 59:3

**goal** 256:11

**good** 5:22 24:14 183:4 190:18  
194:11 197:7,14 210:1,2 224:20  
227:2 236:24 237:25 243:10 251:23  
255:5 270:17 276:5 302:23 341:23

**goose** 208:12

**government** 224:23 225:9 226:13

**government's** 224:15

**grad** 271:9

**grant** 10:6 14:7 18:1 19:13 90:4 93:2  
101:6 131:4 159:18 169:19 171:7  
240:7 324:9

**granular** 307:7 308:1 319:8

**granularity** 297:11 327:18

**graph** 42:2 173:13 214:6,8 215:3  
241:21

**graphical** 164:14

**great** 62:5 308:10 343:2,3

**greater** 40:20 254:7

**gree** 142:4

**Grimes** 121:8,9,23 125:20

**grocery** 277:1 327:6

**ground** 275:6 296:14

**grounded** 24:23 25:4 27:11

**Group** 3:11

**grouping** 277:22

**grow** 208:14 209:1 212:17

**growing** 146:16 216:18 254:5

**grows** 41:18

**guess** 43:19 45:24 49:10 55:24  
62:17 128:12 190:25 259:23 269:5

**Guide** 4:10 105:20

**guidelines** 30:25

**Guy** 154:1

---

**H**

**H1n1** 156:6,11,14,24 157:17 158:16,  
24 159:6,20 161:6,21 162:2

**Hal** 4:2 5:6,16,24 6:2 150:19

**half** 6:18,21,25 239:16

**ham** 227:2,4

**hams** 262:19

**hand** 191:3 192:3,4 201:4,6 225:2,7  
282:10,11

**handful** 11:4 343:4

**happen** 13:3 76:7 155:2,7 274:4  
289:20

**happened** 11:3 30:11,12 37:5 64:4,  
18 74:17 81:1,4 97:20 144:13 156:20  
161:5 168:25 216:7,12 241:12,18  
257:17 260:12 298:18 333:19 334:6,9

**happening** 13:8,9,15 76:8 90:17  
116:6 133:25 134:10 141:19 228:14  
303:15 330:24

**happy** 31:22

**hard** 133:17,23 225:1 263:11 273:12  
306:18

**harder** 320:10

**hardship** 155:25

**harm** 23:13 188:7 243:5,8,12 247:23  
251:8,15 252:3 276:14 300:8 332:15,  
21 333:5 334:2 340:1

**harsh** 133:16

**Harvard** 63:13

**harvest** 42:25 56:11 63:13 65:15,17,  
22 66:7,9,12,15 70:23 74:23 75:14  
79:21,22 80:2 81:3 82:11,21 134:4,11  
229:14 259:12 261:1,10,13,18,20,22,  
24 262:10 339:9,13

**harvested** 81:6 82:13

**harvesting** 71:19 180:21

**head** 104:5 123:20

**header** 108:19 109:2 213:5 329:8

**heading** 239:18 267:23

**hear** 22:4,8 212:23 254:19 259:18

**heard** 14:16 179:3 198:24

**hearing** 177:21

**heart** 33:3

**heavier** 153:9

**hedonic** 31:7

**Heel** 262:15

**held** 23:8 39:17 84:15 163:14 238:4  
297:20 341:5

**helped** 66:21

**helpful** 89:12 154:2 194:24 202:8  
271:18 284:13 285:22 303:3 324:11  
339:19

**herd** 56:5 59:24 61:1,9,24 62:19  
64:19 100:10 101:9,16,17 103:5  
128:16 129:1 131:1,8 138:12 160:24

161:15 162:8 168:23 169:1,8,18,21,25 170:2,8,25 171:2,11,22 172:3,10 173:16 175:7 230:22 231:11,12,17 232:21 241:24 243:1

**herds** 138:8

**high** 154:6 171:5

**high-end** 284:21

**high-entry** 332:5

**high-level** 41:1

**higher** 67:6 154:15,20 190:9 196:9 198:4 212:16 329:12

**highlight** 20:10 325:21

**highlighted** 234:11

**highly** 34:19 284:13

**hike** 265:24

**hikes** 250:22 306:14

**historical** 171:5

**Historically** 154:5

**history** 154:7

**hitting** 346:18

**hog** 4:10,11 72:9,10 75:11,16 83:19 90:10,25 91:5,13,21,25 92:1,18,20,22 93:1,12,19 95:7 96:1 105:20 106:24 109:15 110:10,11 121:6 131:22,24 132:8,12,21 133:7 134:24 140:15 148:17 150:4,10 154:9 157:18 159:9,10 164:13,15,22 165:8,15,21 167:14,15,18 175:25 176:11 179:9,22,25 180:6 181:25 208:4 210:12,22 211:24 212:16,21 234:18 236:19 237:8 271:25 272:5,10 285:14,17 286:12 333:10 335:14

**hogs** 65:24 72:8,14,23 74:3,9,25 75:19,21 76:2,3,16 77:1 78:1,6 79:1 80:5 81:20 82:2,3,13,14,20,21,24,25 83:1,4,5,17 84:1 85:1,8 86:7 87:23 89:15 91:15,22 93:13 94:19 98:9,10 99:5 100:3 105:4 106:21,23,24 107:3 110:4,5 111:13 112:11 113:2,3,6,10 114:6,21 115:13 117:4 120:8 122:21,25 123:14,22 124:5,17,21,24 125:2,3,10,22 126:13,17 127:5,17 128:6,7,17 129:3,19 130:17 131:2,9,20 132:3 134:4 135:9,11 136:4,7 142:5,6,22 146:22 147:10 148:9 150:5 157:4,7,8 158:19 160:25 161:1 162:24 180:17,22 181:1,5,18 211:12,25 212:8,9,17 219:2 236:22 261:13 339:10,13

**hold** 167:23 225:16 240:6 279:25

297:3

**holding** 246:5

**holds** 280:3

**homogeneous** 285:9

**homogenous** 294:8

**honestly** 186:5

**hope** 287:7

**hoping** 154:20

**horizontal** 46:18 120:3

**Hormel** 3:16 48:6,7,14 99:14 130:7 180:21 181:4,23 182:1 232:1 262:13,17 310:24 311:4,5

**Hormel's** 129:18

**hour** 84:9 150:19 151:5,7,9 311:4,342:6

**hour-and-a-half** 150:25

**hours** 65:23 341:24,25 342:7,12

**House** 143:24 144:18,23 145:5,11 146:13 172:4

**huge** 339:21

**hundred** 125:14 206:1 289:1 346:7,12

**hundreds** 140:10 153:1 253:14 332:23

**hypothesis** 266:9,10,12

**hypothetical** 13:1,6 24:17 25:9 26:21 34:20 75:10 80:24,25 83:12 92:5 93:10,17 94:9 137:9 155:6 157:23 159:14 161:3 166:1 167:25 172:24 173:18 178:18 182:4 190:14 219:22 303:21 328:10

I

**i.e.** 267:4

**ID** 281:2,16 282:1 285:7,10

**idea** 108:9 127:16 168:3 200:12 233:12 236:15 237:9

**identification** 6:4 18:11 105:23 121:2 139:15 152:9

**identified** 67:10 72:22 142:25 193:14 204:23 222:11 321:8 323:1

**identify** 10:12 11:7 14:13 50:4,19 101:14 115:22 194:4 198:9 230:9 299:23 303:16 309:4,10,19 320:6 321:23

**identifying** 8:4,11,18,21,24 51:18 343:11

**ignore** 233:21

**ill-gotten** 21:6,13 23:15

**illegal** 21:5

**Illinois** 3:13

**imagine** 120:17 305:6

**immediately** 237:19

**immunized** 270:22 276:14

**impact** 10:7 31:5 104:21 185:9,19 186:17 187:5 204:3 220:18 224:15 225:10 226:4 255:7 272:14 274:10 275:8 287:11,12 289:1 290:25

**impacts** 105:3 184:3 277:24

**implement** 128:15

**implemented** 128:20

**implicate** 232:24

**implicated** 39:7

**implication** 177:1

**implicit** 327:15

**implies** 246:3

**imply** 107:19

**importance** 141:2 311:13

**important** 13:22 16:8,23 17:18,25 19:17 30:17 34:24 35:1 97:1,7 158:15 183:22 184:10 186:18 188:20,24 189:1 192:20 197:2 198:14,16,18,20 204:3,9 234:10 275:3,6,20 281:12 284:7 307:3 309:5 313:10 324:10 346:4,13

**importantly** 345:23

**imposes** 221:14

**impossible** 98:5 206:17

**impounded** 287:8

**impression** 114:3 115:1 116:9 344:9 345:9

**impressive** 214:21

**improper** 118:22

**improve** 237:16

**improving** 106:15

**inadmissible** 29:7,21

**inadvertently** 204:12

<b>inappropriate</b> 175:9	<b>incurring</b> 162:9	<b>inflation</b> 162:1 177:9 249:14 264:11 288:20
<b>incapable</b> 103:18	<b>incurs</b> 88:9	<b>inflationary</b> 336:6
<b>incentive</b> 301:3	<b>independent</b> 89:21,24 91:1,13,21, 25 93:1 94:4,12,18 95:7,25 97:2,22 98:12 99:7,17 101:11,15 103:4 109:15 110:4,10 111:13,16 113:13 114:7,21 116:2 117:5 120:8 124:6,9 125:4,12,24 127:6,20 131:21 133:8 134:4,14,23 137:11 138:7 143:20 144:1 145:25 146:20 147:20 172:6 207:22 208:3 209:14,18,24 210:2,12 232:8 234:19 240:11	<b>influence</b> 142:17 143:1 146:4 222:6, 12 287:6 344:15
<b>incentives</b> 338:4	<b>independents</b> 111:20 124:14 125:8 138:17 139:1 142:13,16 169:13 232:24	<b>influenced</b> 148:3 177:13
<b>inclined</b> 214:24 247:17 274:18 294:9	<b>index</b> 4:1 267:5,15 268:1,14 270:9,12	<b>inform</b> 29:2 126:8 243:21 258:20 328:13 343:17 344:3
<b>include</b> 39:2 54:6,25 64:1 65:12 109:4 110:6,18 111:20 158:15 176:10 226:21 228:18 234:17 259:9 280:20 281:1 291:2	<b>indicating</b> 49:1,14 74:17	<b>Informa</b> 240:13,18,24 241:14
<b>included</b> 42:10 106:2 108:6 217:5 234:18 289:24 295:4,8 315:14 334:14	<b>indication</b> 316:13 324:21 328:5	<b>information</b> 32:15,16 35:10 36:6,14, 15,18 37:22 39:18 50:15 53:2,7 56:23 57:3,10,23 59:1,20 60:15 67:14 68:6, 7,9 106:16 115:5 120:12,18 132:21 149:14 150:1,17 193:20 229:20 248:3,6,7 280:11,19 300:13 304:23 306:16,19 312:2 314:1 317:25 318:7, 10 319:4,15 320:5 321:10 322:8,18
<b>includes</b> 33:25 35:24 52:8 106:22 113:2 286:15	<b>indicative</b> 102:22 193:15 201:23 202:8 332:5	<b>information-sharing</b> 265:6 306:15 308:12 337:16
<b>including</b> 27:17 93:10 94:19 143:23 147:3 188:14 202:24 204:15 217:7,14 345:25	<b>indicator</b> 197:13 324:4	<b>informing</b> 198:15 344:5,10,14,24 345:10,12,23
<b>inclusion</b> 153:15 279:12	<b>indicia</b> 325:18	<b>infrastructure</b> 146:22 147:10
<b>income</b> 271:22	<b>indirect</b> 176:8	<b>ingredients</b> 286:6
<b>incomplete</b> 25:9 26:21 92:5 93:17 94:9 137:9 157:23 159:14 161:3 166:1 167:24 172:24 176:13 178:18 182:4 219:22 328:10	<b>indirectly</b> 344:5,14,25 345:10,12,24	<b>initial</b> 14:20 15:25 174:11
<b>inconsistent</b> 141:17 333:2	<b>individual</b> 137:5,20 253:13 255:3 277:8 279:25 301:4,15,23 319:21 320:24 322:7 338:4	<b>injury</b> 63:8 215:15 227:9 288:23 289:18
<b>increase</b> 42:16 44:10 47:9 49:2,16, 25 50:22 53:1,12,15 54:7,22 59:19 61:16 66:14 68:9 71:13 135:18,22 138:9 176:20 192:9 193:22 207:23 211:3 212:7 218:1 219:19 223:19,20 225:5 228:2 246:5 253:15 254:10 271:21 272:23 273:14 299:12 302:17 308:11 321:3	<b>induce</b> 304:24	<b>innovation</b> 283:16
<b>increased</b> 40:16 41:13,23 55:14 63:12,15 203:2 206:15 210:1,12,21 211:12,23 216:14 225:10 231:11 329:14 337:6	<b>inducements</b> 204:25 325:16	<b>input</b> 135:17
<b>increases</b> 66:20 166:20 177:2 205:25 206:10 211:12 212:14 223:3,4 226:12 282:4,19 283:7 304:21 312:25 320:6 333:20 335:15 338:18 346:7	<b>industries</b> 34:18	<b>inputs</b> 87:13,16 283:15
<b>increasing</b> 39:3 42:3,22 45:22 55:1, 7 156:18 213:19 217:6 221:5,23 222:13 225:6 318:17 332:19 335:21 338:10,14 339:13 340:8	<b>industry</b> 4:12 17:7 34:20 89:25 116:6 140:15 141:5 152:16 155:8 178:3 183:7 188:18 231:15,19,20 234:1 237:17,20 307:23,25 315:19 329:7 346:10	<b>inquiry</b> 225:20
<b>incremental</b> 88:22 89:4 243:14 249:6	<b>industry-level</b> 308:3	<b>inside</b> 334:16,17
<b>increments</b> 151:1	<b>industrywide</b> 234:3,15,17	<b>insight</b> 62:23 303:12
<b>incriminating</b> 305:19	<b>infer</b> 61:18 116:19 124:12 322:24	<b>insights</b> 227:3
<b>incurred</b> 85:22 160:6 201:22	<b>inference</b> 107:6,8,15 124:9 125:7 126:3 157:11 158:1 234:23 251:25 266:15 325:24	<b>instance</b> 13:18 16:6 30:8 71:24 72:22 73:9 74:7 83:16,24 134:2 263:18 306:1 310:23 322:6
	<b>inferences</b> 336:21	<b>instances</b> 190:7,16 322:2
	<b>inferring</b> 107:21	<b>instant</b> 182:11
	<b>inflate</b> 45:4 129:14 130:4,21	<b>institution</b> 206:11
	<b>inflated</b> 129:9,13 272:21 275:10	<b>institution's</b> 206:14
		<b>institutional</b> 62:25
		<b>instruct</b> 12:3 49:5 61:3 73:2,15 78:19 86:11 95:9 101:21 103:7 128:8 162:12 210:4 260:3 314:24 319:24 326:17 327:12

<b>instructed</b> 21:10 96:12	<b>invariably</b> 299:20	118:18
<b>instructing</b> 79:8,13 95:17,20	<b>inventory</b> 74:3 104:7	<b>Josh's</b> 109:21
<b>instruction</b> 73:15 74:11,18 75:6 77:4 78:3 79:3 96:3 129:6,23 163:1 210:24 211:15 212:1,11,18	<b>invest</b> 255:3	<b>judge</b> 21:18 30:21 31:5
<b>instructions</b> 290:24	<b>investigate</b> 235:20	<b>judgment</b> 92:19
<b>instrument</b> 220:3	<b>investigating</b> 144:23 145:13,14 224:25	<b>June</b> 5:4 248:24
<b>integrated</b> 89:6,10,17 98:22 99:1,20, 22 111:18 112:23 113:11 117:6 120:9 123:23 127:14,19 143:3 148:21,25 149:4,5,10,20 150:3 180:25	<b>investigation</b> 145:11	<b>jury</b> 23:5 31:10
<b>integration</b> 124:1 149:15	<b>investing</b> 253:13 332:23	<b>justification</b> 243:11
<b>intended</b> 272:13	<b>invitation</b> 231:25 232:20	<b>justifications</b> 27:3,21
<b>intending</b> 319:3	<b>involve</b> 6:19 110:4	<b>justified</b> 26:3
<b>intent</b> 225:20 231:16	<b>involved</b> 29:17 32:13 36:5 42:21 52:3 281:19	<b>justify</b> 27:6
<b>intention</b> 290:21	<b>involves</b> 32:21 72:14 110:1	<hr/> <b>K</b> <hr/>
<b>intentionally</b> 114:12	<b>Iowa</b> 85:15 87:7,10,11,17 90:23 164:12 285:18 286:9,24	<b>keeping</b> 151:16
<b>intentions</b> 329:11	<b>irrelevant</b> 133:9,16 221:11 254:17 310:3	<b>key</b> 24:21 108:19 299:7 300:18 301:12 307:17 320:16,19 324:4 334:1
<b>interact</b> 274:23 315:21	<b>isolate</b> 24:3,12,25 176:7 177:9 336:10	<b>Keyboard</b> 31:3
<b>interaction</b> 109:9	<b>isolation</b> 339:18	<b>kick</b> 304:2
<b>interest</b> 128:5 129:3,12,18 130:7 135:7 136:5 140:24 192:22 204:6	<b>issue</b> 36:10 74:24 144:24 219:14 290:22 345:8	<b>kind</b> 25:21 41:1 59:2 63:25 102:20 115:9 116:11,23 117:15 119:13,22 129:2 133:16 136:19 151:8 160:21 173:21 191:19 199:11 205:1 212:24 220:9 244:5 254:18 256:20 266:8 270:20 274:13 285:3,12 297:6 301:20,21 304:4,6 307:23 317:14 319:14 320:16 337:16
<b>interested</b> 8:17 30:7 51:17 185:7 201:2 213:4 215:18 225:18 228:12 242:23 247:11 261:19 285:24 289:21 315:12 319:15 325:7 326:9 329:6 331:18 334:20 337:4,7	<b>issued</b> 143:23 342:23	<b>kinds</b> 283:20
<b>interesting</b> 214:5 226:2	<b>issues</b> 10:7	<b>KIRKLAND</b> 3:12
<b>interests</b> 203:16	<hr/> <b>J</b> <hr/>	<b>knew</b> 307:11
<b>intermediary</b> 67:14 295:10,13 297:12	<b>Jacob</b> 3:25 5:9 6:5 105:13 109:3 110:25 112:1 139:7 151:23 152:5 153:18 164:7 194:22 213:2 328:24	<b>knowing</b> 99:11 284:11 307:7,8 313:2
<b>internal</b> 262:13 330:20	<b>January</b> 121:22 175:4 246:20 248:2, 5,24 249:7,20 252:6	<b>knowledge</b> 22:22 107:22 207:15 209:22 234:8 318:11
<b>internally</b> 98:25 195:3	<b>Japan</b> 196:10 219:2 239:14	<b>Korea</b> 196:10 239:13,22
<b>interpret</b> 109:19 246:9 253:7	<b>Jason</b> 5:24	<hr/> <b>L</b> <hr/>
<b>interpretation</b> 114:23	<b>JBS</b> 232:1	<b>label</b> 285:3
<b>interpreted</b> 277:8,14	<b>Jimmy</b> 29:13	<b>labeled</b> 169:20,22
<b>interpreting</b> 253:21	<b>job</b> 184:21 185:16 186:23	<b>labor</b> 286:15,21
<b>interprets</b> 32:24	<b>John's</b> 29:13	<b>lacks</b> 45:15 134:19 138:2 316:19
<b>interrupt</b> 14:23 15:5,13,18,19 118:4 151:14 158:10	<b>join</b> 304:24	<b>lag</b> 182:8,9,13,14 184:6,10,20,24 185:8,14,18,21 186:8,19 308:20
<b>interrupted</b> 39:16	<b>JONATHAN</b> 3:19	<b>lagged</b> 183:13 187:4
<b>interrupting</b> 14:25	<b>jonathan.todt@faegredrinker. com</b> 3:21	<b>lamb</b> 106:9
<b>introduce</b> 219:9	<b>Josh</b> 69:20 79:11 113:19 117:21	

<b>language</b> 26:6 109:19 196:22 234:2, 23 305:20	<b>lever</b> 65:18 67:2 77:10 79:25 229:10
<b>large</b> 116:6 143:1,8 165:1,2 169:12 277:1,22 278:25	<b>levers</b> 66:13 67:1,22 101:7 128:14 130:24 131:3 134:9,12 189:14 214:15 221:22,25 223:2 225:4 229:15 230:20 250:19,25 259:10,11 339:8
<b>largely</b> 254:17 285:9 294:8	<b>Lexitas</b> 5:10
<b>larger</b> 195:4 290:16	<b>liability</b> 9:6 10:2
<b>largest</b> 208:15 209:2	<b>life</b> 110:25
<b>Lasalle</b> 3:12	<b>lifecycle</b> 72:14
<b>lasting</b> 250:12	<b>lifestyle</b> 72:13
<b>lasts</b> 102:18	<b>lifts</b> 221:13
<b>late</b> 252:13 311:4 323:21	<b>light</b> 120:16 205:2 256:3
<b>launched</b> 230:2	<b>likelihood</b> 258:22
<b>launching</b> 124:14	<b>limit</b> 290:21
<b>law</b> 24:2 32:23 33:2 35:4 38:17	<b>limitations</b> 335:1
<b>lawful</b> 17:22 19:2,19 23:22 24:14 28:19 190:10 201:4,14	<b>limited</b> 233:3 334:25
<b>laws</b> 9:11,18,19 25:23	<b>limiting</b> 129:5,23
<b>lawyer</b> 62:15	<b>linear</b> 171:15,24 173:22 174:5 282:16,24 283:3,4,17
<b>lawyers</b> 254:19	<b>lined</b> 298:24 299:1
<b>lead</b> 12:23 339:24	<b>lines</b> 60:12 283:8 317:17
<b>leaner</b> 153:8	<b>lingering</b> 102:8 279:3
<b>learn</b> 320:11	<b>liquidate</b> 138:24
<b>leave</b> 6:6 43:20 51:16 62:14 67:7 68:16 96:21 110:7 139:1 152:22 166:4 189:2 200:10 247:4 250:18 268:22 308:21 310:20 315:23	<b>liquidated</b> 84:1 104:8 235:21 236:4, 12 242:8
<b>led</b> 154:6	<b>liquidating</b> 77:1 235:7,10,12 236:25
<b>left</b> 45:9,18 46:1 282:1 346:13	<b>liquidation</b> 43:1 56:8,11,15 60:4,6,7, 9,18 63:1,14,15,16 65:15 73:20 77:9, 13,21 78:1,6 79:1 80:5 83:4,10,12,17, 18 84:4 101:1,6,7 128:21 134:10 138:17 229:14 231:1 237:4,11,15,18 243:6,9,11,14 259:11
<b>legal</b> 16:19 19:8 20:5 21:3,19 22:1,24 23:1,13,18,25 25:23 33:8,11 35:3 37:25 38:11 42:19 44:1,23 48:21 49:4 69:16 190:12 191:8 201:16 244:2 259:8 264:22 314:23 316:19 324:7 325:4,12	<b>list</b> 6:13 176:14 310:13 322:19 328:4
<b>legitimate</b> 25:3,5,15 27:11	<b>listed</b> 111:7 115:16
<b>lens</b> 306:9 334:1	<b>listen</b> 15:15
<b>les</b> 132:16	<b>listing</b> 148:23
<b>letterhead</b> 121:12	<b>lists</b> 122:19,22 233:6
<b>level</b> 89:7 116:23 129:10 132:18 168:21 197:20 297:11,12,13 307:7,8 308:16 319:8 327:18	<b>literally</b> 246:15 316:22
<b>levels</b> 66:22 135:3 143:12 147:19 202:24 246:12 308:2	<b>literary</b> 58:6
	<b>literature</b> 44:15 204:24 300:17 325:15
	<b>litigation</b> 5:8 176:9
	<b>litter</b> 72:15,17
	<b>live</b> 106:24
	<b>lives</b> 103:23
	<b>livestock</b> 106:6 109:7,8
	<b>LLP</b> 3:2
	<b>LMR</b> 4:10 105:20 106:13 108:19
	<b>loathed</b> 36:21 337:25
	<b>Lobbying</b> 207:13
	<b>log</b> 246:13
	<b>logic</b> 226:7
	<b>logical</b> 217:25
	<b>logs</b> 246:13
	<b>loan</b> 284:23
	<b>long</b> 50:7 80:15 92:12,13 102:3,15, 18,22,23 103:24 151:2 208:4 213:13 253:2 286:18 293:7 295:6 297:17 323:7 341:18 342:3,8,15
	<b>long-lasting</b> 102:9
	<b>long-term</b> 171:5,10 172:2 173:12 175:6
	<b>longstanding</b> 165:13 169:16
	<b>looked</b> 12:21 51:5 73:13 86:18,20 91:3,4,10 101:24 104:17 113:16 139:23 173:24 174:1 191:16 193:5,17 209:5 214:23,25 215:9 256:14 260:14 266:5 267:12 283:2 302:22 333:18
	<b>lookout</b> 35:9
	<b>lose</b> 269:18 270:20 276:8
	<b>losing</b> 92:1 94:4 157:19 159:11 236:18 274:6
	<b>loss</b> 92:21 137:21 182:25 183:11,12, 20,21 184:1,4,9,11,17 185:2,14,22,24 186:12,17 190:25 191:1 194:10 201:22
	<b>losses</b> 160:6 162:9 164:8,12 166:12, 24 236:16 237:7
	<b>lost</b> 20:17 93:24 156:10,23 157:13 160:10,15,22 161:17
	<b>lot</b> 143:7 199:13 258:4 263:16 274:9 276:16 307:4 310:5 313:5 321:21
	<b>lots</b> 76:6
	<b>lower</b> 41:2 135:10 190:17 222:25 258:9,13 306:24
	<b>lowered</b> 157:3

<b>lowering</b> 136:6 156:19	<b>margins</b> 177:16 178:4,6,14	<b>maximizing</b> 320:12
<b>lunch</b> 150:22 163:14,21 164:2	<b>mark</b> 6:1 18:8 257:15	<b>MBR</b> 122:14
<b>luxury</b> 313:7	<b>marked</b> 6:3 18:10,15 105:18,22 121:1,5 139:10,14,18 152:8,13 329:3	<b>meal</b> 286:7
<b>M</b>	<b>market</b> 66:19,24 67:19 72:8,18,24 74:3,9 76:9,22,23 78:1 79:1 80:5,9,11 81:1,11,13,14,18,21 82:6,7,16 83:4, 17 84:1 85:7 86:7 87:22 88:13 89:15 92:22 94:19 97:18,19,21 98:9 101:25 102:1 106:7,17 109:6,15 110:19 111:9,10 122:20,25 123:3,7,9 125:10, 19 126:15,18,24 130:4,6,12,16 131:2, 5,9,15,19,24,25 132:7,15,16,19 133:5,6,8,13,22 134:20,21,22 135:1, 21,22 136:3,14 137:2,6,12,19 138:2,5 141:16,20 142:19,23 143:2,9 144:2 147:2,3,16,19 148:2,9 150:15 154:9, 25 157:8 161:8,9 166:9 169:5 175:23, 25 176:1,3,4,17 180:15,17 181:17,19, 22,25 183:23 186:14,18,24 187:10,11 190:20 194:7 197:12 201:9 212:4,23, 25 221:9 226:9 228:12 238:16 241:15 242:10,20,21 243:19 259:12,14 262:18 271:23 272:5,7 285:1 290:15, 16 324:17	<b>meaning</b> 177:22
<b>Macbook</b> 31:2,3	<b>marketing</b> 4:11 70:11 77:1 121:6 304:24 312:12	<b>means</b> 35:21 37:8 83:5 141:23 149:4 176:19 250:7 338:21 344:2
<b>machinery</b> 215:12	<b>marketplace</b> 102:10 106:14 187:8 256:24 278:23 308:15 330:24	<b>meant</b> 37:3 221:9 232:19 243:19 284:6
<b>made</b> 14:4 32:1,3 58:24 75:12 84:3 102:11 183:8 188:5 189:18 238:15 242:24 302:24 306:14 311:18	<b>markets</b> 126:14 131:6 197:10 201:7 216:17 224:22 228:5	<b>measure</b> 90:6 229:21 292:19 336:16
<b>made-up</b> 313:18	<b>marking</b> 139:11	<b>measures</b> 20:16 170:15 207:23
<b>main</b> 275:13	<b>marks</b> 323:10	<b>measuring</b> 203:7 270:12
<b>maintain</b> 134:16 147:10	<b>match</b> 4:12 299:3,4,16,18,19	<b>meat</b> 228:4 284:24
<b>maintains</b> 91:15 132:20	<b>matched</b> 296:15 299:7	<b>meats</b> 227:13,14 228:19
<b>maintenance</b> 262:17,24,25 263:2,19	<b>matches</b> 298:24,25	<b>mechanics</b> 98:2
<b>major</b> 30:14,15,16 155:2	<b>matching</b> 292:5 296:12 298:15,20, 21 299:20	<b>mechanism</b> 55:9 67:2 101:3 110:12 191:12 300:24 301:7,22 302:3 310:8, 12 317:19,22 319:18 320:9,16 339:14
<b>majority</b> 6:25	<b>material</b> 142:21 148:17	<b>mechanisms</b> 43:2,18 55:10 56:13 61:19 62:10 65:1,3,8 70:24 113:4 142:25 146:6 189:14 229:23 338:21 339:2
<b>make</b> 11:13 13:23 28:13,18 41:19 43:11 58:11 71:8 77:8 86:24 91:22 93:14,18,21 94:12 100:22 107:7,9 113:21 116:24 118:24 130:14 134:14 137:10 147:8,15,23 179:7 181:20 182:1 186:6 188:25 208:1 247:10,13 258:21 264:6 266:4,14 270:7,21 275:23 277:21 278:16 279:11,14 283:24 287:23 293:13 299:8 303:4 307:13 309:18 311:14 323:13 343:6	<b>meet</b> 228:21 229:8 290:2 341:18 342:3	
<b>makes</b> 91:14 92:18 110:25 154:12 156:13 286:25	<b>marketing</b> 231:25 233:3,25 234:1 314:17,19 315:15	
<b>making</b> 34:10 39:8 46:11,22 50:16 51:15 52:5 54:11 60:3 89:3 92:12,13 97:13 107:15 118:8 148:1,2 181:1 190:3 199:8 215:13 233:17 261:17 293:18 304:21 318:3 322:7,23	<b>meetings</b> 305:15 315:20 316:11	
<b>manager</b> 342:1	<b>meets</b> 16:25 66:6 266:2	
<b>mandate</b> 39:14 41:8,9	<b>member</b> 48:16 313:6 314:8 323:15	
<b>mandatory</b> 86:1 87:2 106:6 107:4, 16,18,20 108:5 125:19	<b>members</b> 108:12 301:4,24 303:3,8 306:25 312:15,18 314:12 315:16 338:7,8 340:5	
<b>manifested</b> 42:23 183:25 334:2	<b>memorization</b> 248:16	
<b>manipulating</b> 262:18	<b>memorized</b> 47:13 323:12	
<b>manual</b> 276:18	<b>memory</b> 51:11 102:6 231:5 248:17 298:12	
<b>mapping</b> 200:8	<b>mentioned</b> 35:14 70:23 188:15 191:17 194:9 199:13 214:14 231:8,14 283:6 285:2 294:25 318:8 331:9,13 332:3	
<b>margin</b> 177:17,18,20,22,25 254:13	<b>mentions</b> 329:9	
<b>marginal</b> 89:3 143:11 254:13 339:6 346:7	<b>menu</b> 284:22	
	<b>mere</b> 254:16 333:3	

merit 337:8	missed 227:14	monthly 297:12 305:15
merits 192:18	missing 168:20 257:15	months 80:21 160:11 183:1 184:13 298:8
met 16:11 137:6,22 138:25 341:14,15	mission 208:21 223:18	morning 5:22 285:16
method 53:24 56:8	missions 223:15	mortality 90:19 104:24,25 182:23 184:25
methodology 11:15 21:11	Missouri 121:13,20 122:1,5	motion 70:13
methods 16:24 17:15 39:1 266:13	misspelled 345:22	motivated 27:1,15 261:3
metric 183:20 206:12 209:9	misstated 298:3	motivation 26:3 244:4
Meyer 139:18,25 140:13 160:2	mistake 43:8	motivations 27:25 28:1
Meyer's 141:11	mixing 292:7,15	mouth 186:6
mid-'90s 169:17 170:6 173:12 175:7 213:9	model 24:8,11,20,25 25:6,16,17 26:16,25 30:10 31:5,6,8,9,10 57:2,6, 9,22 62:18,22 63:5,9 64:16,22 69:7 70:2,4,7 84:20 91:12 97:10 129:7 131:11 157:17 161:23,25 166:10 170:13,15 171:9 174:19 175:19 176:6,19 177:2,8 192:8,13 193:3 202:13,17 203:12,19,21,25 204:4,9 205:9 212:3 214:1,4,24 217:12,13,14 218:22 219:8,16 220:2,8 225:22 226:1,7,8,9,18 227:7 228:22 229:25 242:6 246:13,21,23 247:5,9 248:25 249:15 250:3,7 251:1,3 256:23 257:1, 3,8,10,22,23 264:10 269:19,22,25 270:9 272:9,18 277:25 278:11 279:2, 23 280:1,11,12,17 287:10,18,21 288:5,14 297:11 298:7 333:24 337:3, 20,23 344:6,16,19 345:11,13,20,24	move 70:12 159:1 191:11 211:8 219:13 308:9 324:16
middle 30:1 122:11 231:21 239:11 286:4 343:23 345:17	modeled 333:25	moved 175:14
midway 10:18	modeling 40:3 60:22 63:25 212:5 215:8 221:17 222:21,22 224:17,21,22 225:19 226:17 257:7	movement 66:22
million 209:9 332:4	models 226:5 257:21 270:25 272:19 274:13,14 275:4,13,18 276:2 277:13	moves 288:25
millions 253:14 332:23	moment 14:2 47:6 50:3 192:16	moving 67:6 150:25 288:6
mind 7:18 31:1 35:25 38:8 45:12 46:14 50:20 51:20 53:6 66:7 102:16 130:25 132:11 172:9 185:17 186:1,4 187:9 190:23 192:19 195:25 196:13 197:25 220:23,24 221:3 225:13 268:6 275:21 278:5 283:8 302:5 307:17 320:16 324:2	money 89:3 92:1 94:4 109:14 160:10,22 224:8 236:19	multifaceted 250:20
mine 8:16 230:12	monitor 120:1 190:2 202:3 300:19 301:23	multiple 115:19 140:6,11
mini 250:11 251:11	monitoring 193:21 204:25 300:24 301:7,13,21 302:21,22,24 303:3 309:3 325:16	mutually 124:11 135:23
Minneapolis 3:4,18	monopolized 97:15 133:20	myriad 75:18 92:25
Minnesota 3:4,18 121:24 122:2	monopoly 27:23 34:22	 <b>N</b>
minus 288:5	monopsony 27:23 143:7,15 145:24 146:10	N.W. 3:8
minute 37:20 244:22	month 246:19,22,25 247:7,11,12 248:23 249:5,6,19,23 250:5,12,15 252:7 254:21	NAFTA 213:9 214:7 220:21
minutes 163:8 340:23	negotiated 109:5,13 110:1,3,8,18 111:8 122:24,25 126:14,18,24	narrative 50:7 114:10 322:11
misattributing 161:25 202:22	net 106:23 108:18,22	Natural 121:14
mischaracterize 52:16 118:10	 	naturally 12:16 66:18,19 70:19 126:25
mischaracterizes 47:11 50:24 52:13 58:5 59:11 113:15 117:17 129:22 200:5 213:17 222:8 241:8 306:4	 	nature 132:6 284:12
mischaracterizing 71:6 114:12 118:20	 	necessarily 32:25 40:23 111:17 115:3 119:25 166:2 178:19 202:5 258:12
misconduct 8:5 96:25	 	needed 185:6 237:16 302:11 313:1
misinterpreted 99:24	 	needing 263:19
misleading 116:20	 	negate 133:21 336:6
mismatch 293:23	 	negative 178:15 267:14,25 268:12 269:12 270:10 272:10 274:1
misremembering 149:19	 	negotiated 109:5,13 110:1,3,8,18 111:8 122:24,25 126:14,18,24

**News** 156:6  
**nice** 151:19 160:2  
**NIPC** 231:23  
**no-go** 10:20  
**nondefendant** 240:12,14,15 296:5  
**nonfeed** 286:8,21  
**nonmaterially** 149:5  
**nonsensical** 175:13  
**nonvertically** 89:10  
**normal** 158:23  
**North** 3:12  
**notable** 190:22  
**note** 6:11 8:3 89:5 138:18 233:10 259:1 268:19 270:25 282:16  
**noted** 5:11  
**notion** 34:9 75:14 172:5 337:19  
**notwithstanding** 154:15 332:7  
**nuclear** 239:13  
**number** 65:23 89:15 91:14,15 94:17 97:23 99:10 109:1 117:11 123:8,9,10,13 126:7 128:17 129:2 132:21 160:25 162:23 172:20 179:19 222:5 232:7 238:24 247:21,24 260:20 261:5,24 262:2,10 283:15  
**numbered** 153:24  
**numbers** 41:11 125:21 184:11

---

**O**

**object** 9:24 10:14 11:25 14:15 17:10,24 19:21 24:16 25:8 26:20 28:6 33:6 38:10 41:16 42:18 45:14 48:9 49:4 50:1,6 52:12 54:8,24 55:16 58:4 65:19 68:3,21 69:15 70:6 71:6,7 77:3 88:20 92:4,24 93:16 94:8 96:2 97:25 98:18 100:12 107:24 108:8 113:20 114:9,10 117:16 123:24 130:18 135:12 136:8 137:24 138:13 140:16 141:12 148:18 149:16 155:4 157:22 159:13 161:2 165:25 167:21,24 168:15 172:23 178:5,17 182:3 189:9 190:11 191:7 193:10 199:3 200:4 203:18 204:7 208:6,23 209:15 210:3 212:10 213:16 214:11 217:9 219:21 222:7 224:10 225:14,17 228:8 230:10 234:21 237:2,13 244:1 252:16 263:8,21,24 274:11 302:9 304:17 306:3 315:18 317:21 319:24 320:18 321:4

322:10 323:17 325:3 328:9 333:12 335:18 338:12 340:11  
**objection** 9:12 12:25 13:5 16:18 19:7 20:4 21:25 23:24 25:19 37:24 44:1,22 47:10 48:20 50:23 51:7 52:21 53:16 55:25 59:10 60:1 64:20 69:3,24 75:4 76:4,19 78:2 83:7 86:9,21 95:15 109:16,22 112:13 113:14,22 118:4,9 119:2 126:1 127:22 129:21 132:23 134:6,17 137:8 146:24 147:14,24 148:10 155:20 161:19 162:11,25 172:12 173:17 200:17 201:10,15 206:22 211:14 223:22 233:5,14 241:7 255:9 259:7 260:2 264:21 310:10 314:22 316:18 324:6 326:16 327:10 330:13 331:1 332:10 339:16  
**objections** 46:5 119:15 316:24  
**objective** 130:20 176:6 230:11  
**observations** 274:6  
**observe** 116:12 120:1 333:20  
**observed** 28:12 166:20 275:25 302:14,18 335:25  
**obtain** 190:8 194:7  
**obtained** 114:21 242:7  
**obvious** 305:8  
**occasion** 7:15 14:3 73:6 77:13  
**occasions** 11:4 30:13 298:19 314:5  
**occur** 42:23 63:1,3 182:11 200:23  
**occurred** 10:20 28:10 61:13 62:20 83:11 138:17 177:2 180:8 194:1 200:14 230:14,15 243:7,14 258:25 261:3 282:18 335:23  
**occurring** 83:13 98:7 131:6 171:13 176:5 190:16  
**occurs** 65:22 131:4 182:12  
**odds** 253:17 256:10 339:14  
**offal** 227:11,16,17,18,22,25 228:18  
**offer** 16:3 53:17 75:6,7 101:20 138:15 167:11 172:5 203:24 211:2,5 227:7 326:17  
**offered** 57:8 73:3 96:15,20 193:4 210:17 260:17 320:1,2,3 326:24,25  
**offering** 68:15,16 77:5 95:11,17 166:17 211:16,20 212:19 260:5,7,19 261:5,7 263:9 272:18 315:2 326:18 327:3  
**offers** 22:24

**older** 242:1 243:24  
**omitted** 24:21 166:18  
**on-the-fly** 32:19  
**ongoing** 308:14  
**online** 332:13 333:4 339:21,23  
**onward** 174:3  
**open** 106:7 338:9  
**opened** 252:21,24  
**openings** 253:3 340:17  
**operates** 307:2  
**operating** 236:16 338:6  
**operation** 65:24 80:20 94:5 168:13 236:19 237:8  
**operational** 261:6  
**operations** 164:13,22 165:16  
**opine** 9:9,22 10:1 33:15,19 102:7  
**opining** 200:13  
**opinion** 12:1 20:7 23:4,21 24:1 28:7 29:7,21 30:9 31:21 40:14 41:2,21,25 44:17,21 45:2 49:7,8 53:18,20 61:4,8,24 62:3,6,18 74:21 75:8 78:18,22 79:7,10,17,20 81:2 95:11,17,20 96:15,16,18,20 101:19,21,23 102:12 103:9,10 128:4,10,11,18,25 129:17,24 132:1,12 138:15 148:7,13 162:13,16 182:5 189:6 200:20 210:6,7,11,15,17,20 211:2,15,19 212:2,19 243:2,3 248:21 249:8 250:2,24 260:4,8,17,19,21 261:5,8 285:8 290:15 300:22 303:7,11 309:14 315:1,13 317:9,13 320:2,8 325:8 326:23,25 327:3,7,13 328:15,18 333:1  
**opinions** 17:2,13 38:12,14 68:15,16 73:3,17,19 75:7 77:5 86:21 96:7 129:25 130:8 132:4 144:8 146:9,12 306:22 319:25 326:18  
**opportunities** 67:16 196:10 208:1 302:16 312:24 320:12 321:24 322:25 343:11  
**opportunity** 308:10 316:4 321:8  
**opposed** 90:14 99:17 127:6,20 313:17  
**opposite** 154:18 190:15 275:8 335:24  
**optimistic** 241:1  
**orange** 169:22

**oranges** 292:7,16  
**order** 5:25 23:21 30:3 81:23 278:22  
**organ** 228:4  
**organization** 231:23  
**orient** 100:17 266:24 273:7  
**oscillation** 164:25  
**oscillations** 165:14  
**other's** 190:2 202:4  
**outbreak** 156:11,24  
**outcomes** 306:8 319:9  
**output** 34:11 36:11 42:21 43:3,15  
45:5 53:25 54:14,15 56:22 61:15,21  
62:7,9 63:5,6,11 64:24 65:2 66:17,24  
67:2,5,20 75:18,20 76:11 80:12  
94:13,18 95:1 97:17,20 98:2,6  
128:22,23 133:13 143:2,10 146:4  
162:18 163:2,5 172:8 189:15 192:12  
193:1 203:9 214:1 216:3 223:4  
229:15,23 253:23 254:1 258:4,8,9,11,  
13 265:5 305:5 317:7 318:4,18  
320:22 324:12 332:14  
**outsider** 310:2  
**outsiders** 304:24  
**Overbroad** 166:1  
**overcharge** 9:3,7,9,23 10:13 11:8  
12:8,24 13:20 14:11,13,14 246:22  
247:6 248:23 249:4,9 255:8 268:2,17,  
25 273:24 275:4 276:2 277:25 287:14  
291:14,21 334:22 336:12  
**overcharged** 278:11  
**overcharges** 8:4,8,9,12,19 251:18  
**overdrive** 216:22  
**overlap** 67:3  
**overreaction** 340:2  
**overrides** 197:24 198:1  
**overstating** 291:4  
**overture** 314:7  
**overview** 329:7  
**owing** 70:21  
**owned** 89:22 99:7 101:10 112:23

**P**

**p.m.** 163:12,15,17 238:2,5,7 297:19,  
21,23 341:3,6,8 347:3,6

**packages** 293:16  
**packaging** 285:3  
**packer** 85:2,3 89:22 108:23 109:6,14  
110:4,9,11 111:12 114:8 115:11  
116:22,24 118:14,15 119:23 120:1,16  
125:5 129:9 132:15 143:1 177:16,17,  
20,25 178:4,6,14,21 179:9 181:23  
231:20 234:1  
**packer's** 116:12  
**packer-owned** 111:23 112:2,12  
113:11 124:25  
**packer-sold** 113:6,12,23 118:13  
123:14 124:22  
**packer-to-packer** 119:22  
**packers** 85:25 86:7 87:2 98:13 107:3  
112:9 113:11 115:19,22 116:7 117:6  
120:9 123:22 124:7 130:15 131:19  
132:2 134:3,24 135:2 138:20,23  
142:9,12,20 143:25 146:3,15 147:4,  
17 148:7,16 172:7 177:18 178:1  
181:11 232:11,21,23 233:3 296:5  
327:24 328:6  
**packers'** 135:6  
**packing** 141:2,4 253:15 255:4  
256:10 259:6 260:1,18,20 332:24  
333:8  
**pages** 30:4  
**paid** 108:23 128:6 134:24 136:7  
176:9 248:22 292:8,10,12  
**pain** 189:21  
**palpable** 329:13  
**paper** 110:24 112:8 122:9  
**paragraph** 18:22 20:10 32:10,19  
37:12,14 52:2,24 55:2,5 65:21 106:5  
141:3 183:17 195:2,20,23 199:21,23  
223:24 224:12 231:9 235:4 237:15  
238:11,13 239:12,25 240:3,4,8,23  
244:21,24 245:14 266:19 267:12,17,  
22,23,24 271:17 273:7 278:7 279:21  
282:14 285:22 291:7 298:5,9 300:10  
331:22 343:8,15,18 345:8,15,18  
346:3  
**paragraphs** 141:23 267:18  
**parameter** 249:1,16,20 251:4 256:2  
287:22 288:7 335:24 344:4,15,22,25  
345:10,13,24  
**parameters** 274:16,21 288:4,13  
344:5,10,16

**paraphrase** 26:2 37:13  
**PARKER** 3:9  
**parlance** 24:19  
**part** 13:22 30:8 54:22 56:5 91:18,23  
100:9,19 128:18 131:23 146:1,17  
148:12,13 154:21 168:2,4 176:1  
187:10 189:2 192:3,7 201:5 203:4  
223:1,18 230:12,16 265:6 304:23  
312:11 313:8  
**participant** 303:22,24 307:9 321:9  
**participants** 106:7 232:3 300:18  
301:8,14,22 309:16,23 310:4,14,16  
313:11,21 315:21 340:7  
**participate** 52:10 58:2,14 59:2  
**participates** 231:22  
**participating** 232:5 324:5,25 325:25  
326:1  
**participation** 325:10,11  
**parties** 99:23  
**parts** 28:9 228:4  
**party** 89:11 187:15 299:17 309:22  
323:21  
**pass** 16:15  
**pass-through** 291:5,17,23 292:17  
293:6,8 294:4,10,14,19 295:9,15,18,  
21,22 296:2,7,10,15,18,22 297:1  
298:6,11 346:11  
**pass-throughs** 296:25  
**passed** 346:8  
**passthrough** 220:10  
**past** 109:23 145:15 171:22 277:10  
**pattern** 133:18 165:3  
**patterns** 275:24 278:16 279:1  
**pause** 80:6 163:9 237:24  
**pausing** 83:5  
**pay** 130:16 131:20 332:8  
**paying** 92:14 109:14 110:4 135:11  
**payments** 29:25  
**pays** 85:4 110:11  
**PDF** 153:20  
**PDV** 183:7 184:24 186:10  
**pencil** 328:2  
**people** 31:22 141:6 142:7,9 158:24

273:13 305:20  
**per-pound** 298:25  
**per-unit** 299:1  
**percent** 21:6 23:14 63:11,12,14  
100:3 124:17,21,24 125:9,22 126:17  
138:20 205:25 206:15 216:14 234:18  
240:25 248:23 249:11 268:20 278:22  
289:1,3,6,12,13,14,19 329:12 346:7,  
12  
**percentage** 98:9,10,24 99:5,15,22  
100:6 101:9 126:13,14 127:5,17  
245:4,23 246:2,9,15 286:11 287:14  
288:17,19,21,25  
**perception** 218:16  
**perceptions** 218:9,20,24  
**perfect** 84:5  
**perfectly** 133:19,20 188:9 190:10  
336:4  
**perform** 11:17 163:2 274:25 289:7  
**performed** 44:18 61:14 62:8 162:15,  
17 295:6  
**period** 64:14 69:5 79:1 83:25 94:3  
98:16,17 104:22 106:22 115:14 117:4  
134:3 143:21 145:16,17,18 146:10  
154:16 155:17,25 157:14 160:7  
161:18 162:10 164:18,21 166:21  
167:9,13 170:16 171:1,14,17,20  
173:25 174:11,20,21,23,25 175:11,  
12,15,16 177:3 182:12,13,19 189:7  
192:21 198:5 200:14 204:11 213:14,  
15,20,23 216:7,8 220:18,20,21  
225:11 229:13 230:8 231:12 236:7,13  
244:9,10,14,15,16,19,20 247:1,3,8  
248:9,12 249:3,8,18 250:10,18 251:5,  
9,18 252:13,22 253:1 255:2 257:5  
261:14,25 264:12 279:4,6,13 287:17  
300:8 303:9 305:25 321:17,18 323:7,  
23 330:9,12,25 332:9,20 333:5,6,10,  
21 334:7,17,18,22 335:8,16 336:10,  
12 337:7,9,11,15 339:22 344:14  
345:2,19  
**periods** 95:5,24 164:25 165:2,21,23  
167:5,14,16,18 246:19 251:17  
**permanent** 159:16  
**permitted** 255:15  
**perpetuate** 305:11  
**persisted** 173:20  
**person** 315:22  
**personal** 196:7

**perspective** 35:3,4,6 294:15  
**pertaining** 71:19  
**pertains** 101:5  
**PETER** 35  
**peter.schwingler@stinson.com**  
3:5  
**phenomena** 173:21 175:14 176:5,16  
**phenomenon** 133:5 147:2 169:4  
204:10 335:3  
**phone** 341:25  
**phrase** 55:1 107:18,22 198:11  
**pick** 217:21,23 246:20 282:25 284:3  
**picked** 186:8 283:5  
**picking** 249:23  
**picture** 160:2  
**pictures** 179:24  
**piece** 44:9  
**pig** 83:19 84:6,21,25 85:2,14,18,22  
87:9,15 88:9,10,13 90:19 103:14  
104:24,25 105:2 141:20 154:13  
182:23,25 183:11,14 184:14 185:11,  
14 186:20 228:3 286:20  
**piglet** 183:12,20,21 184:1,4,9,11,16,  
25 185:2,22,23 186:12,17  
**piglets** 102:4 103:15 172:19 283:14  
**pigs** 71:3 72:1,6,17 81:5,14 85:11,19,  
25 87:2 93:15,21 94:6,20,21 97:23  
98:23 116:1 130:22 138:10 153:7  
185:10 221:15,16,18  
**pinpoint** 264:19  
**place** 70:12 149:23 299:20 318:16  
**Plain** 121:8,10,23 125:20  
**plaintiff** 7:4,11,25 10:3 18:24 19:11,  
14 27:9  
**plaintiff's** 21:2 22:23 23:12 25:25  
189:17 251:7 300:7 340:1  
**plaintiffs** 18:1 19:18,19,22 34:7 36:3  
251:10 290:13 335:5  
**planned** 252:14  
**planning** 192:17  
**plans** 331:23  
**plant** 65:23 75:16 181:6 252:22,25  
253:15 255:4 262:15,24,25 263:19  
283:22 307:8 308:6,19 310:15,16

318:15 331:7,24 332:4,13,24 333:4  
335:13 339:12,23 340:17  
**plants** 250:10 256:10 257:4 259:6  
260:1,18,20 273:12 331:21 333:8  
338:7 339:20  
**plants'** 332:21  
**plausible** 11:15 266:10  
**play** 313:9  
**played** 309:5  
**playing** 314:10  
**plots** 102:20  
**plummet** 324:20  
**point** 4:12 46:19 47:2,7 57:17 78:16  
79:25 88:8,17 89:1 90:1 108:17  
113:22 117:3 118:1 120:6 136:2  
141:11 151:18 154:2 165:6 193:7  
197:16,23 229:12 230:6,21 237:22  
247:8 249:24 251:1 254:15 256:16  
258:4 261:9 266:8 269:21 271:17  
289:15 291:6 320:25 321:5 339:23  
**pointed** 257:8 267:16  
**pointing** 54:1 133:24 261:11 336:5  
**policies** 220:14,16,22  
**pork** 4:12 5:7 39:4 41:14 42:17 43:24  
44:10 46:22 47:23 48:14 53:1,9,12  
55:11 65:8 66:1 70:25 80:7,10 81:9,  
11,15 82:2,10,23 96:24 97:24 105:4  
106:10 110:19 111:9 123:7 130:15  
132:2 145:25 152:14,15,19 154:4,7  
155:16 156:1 157:3,7 158:24 160:3,9,  
15,21 161:9,17 164:2 175:21 182:23  
188:1 189:5,6 193:24 195:6 205:14,  
24 206:6,9,11,12,13,23,25 207:5,9,  
11,22,24,25 208:5,14,16,20,21,25  
209:2,6,14,19,24 210:2,21 211:3,8,11  
212:8 213:5,10 214:10 216:13,19  
217:8,17 218:8,10,17,21 219:17,20,  
25 220:19 221:6,8,18 222:6,19,23  
223:9,21 224:8,9,15 226:14,20,25  
230:7 238:15 239:8 240:19,20 246:5  
253:5,16,18 256:7,8 257:4 265:12  
267:4,9 282:20 284:20,25 289:23  
292:3 293:15 295:1 302:6 314:18  
316:15 327:24,25 329:9,14 330:5,12,  
15,17 332:24 333:1,10,15,19 334:13  
335:11,15 337:6 338:10  
**portfolio** 30:18  
**portion** 107:12 192:8 195:12 271:8  
**portions** 107:11

<b>positing</b> 252:2	<b>premise</b> 27:16 223:14	<b>price-taking</b> 321:8 322:25
<b>position</b> 181:24 182:2 264:8 307:21 338:17	<b>premium</b> 284:25 285:12	<b>priced</b> 306:24
<b>positive</b> 218:11 246:3 267:6 268:7,8 269:7 271:19 272:1 273:16,18 279:18,20 336:1	<b>premiums</b> 284:18	<b>prices</b> 24:7 25:1 34:10,22 42:22 43:16 44:11 45:4 53:1,13 54:20 56:22 58:23 59:19 64:11 66:21 67:7,12,13, 16,17 70:15 71:13 80:13 94:23 106:23,24 129:9,14 130:4,21 131:11, 13 133:12,22 136:13 138:5 143:11 147:3,18 154:9,16,19,24 155:8 156:19 157:1,8 158:25 159:3 175:15 176:8 177:10,13 183:22 185:16 186:14,18 190:19 195:6 197:10 198:4 201:7 202:17 203:10,11 211:10 212:22 213:25 214:3 215:12 225:6 241:25 242:9,20 243:18 246:5,16 247:13,16 254:19,22 255:25 257:11, 24 264:11 267:11 271:22 272:7,21 273:14 275:9 278:1,11,24,25 281:23 282:20,25 285:13 287:1,2 293:22 302:14 304:4 305:5,17 306:23,24 307:10 308:22,23 317:6,11,15 318:3, 11,12,23 319:7,15,22 324:18 328:3 330:7 335:11,22 336:7 338:22
<b>post</b> 279:6	<b>present</b> 3:23 10:18 277:19 289:1	<b>pricing</b> 110:12 113:3 115:16 124:18 186:24 192:8 204:11 256:22,23 265:22 275:24 281:8 285:7 319:4 320:22 321:23 322:4,5,7,17 324:12 334:3 343:11
<b>post-conspiracy</b> 216:8	<b>presented</b> 322:1	<b>primal</b> 179:11,13 274:10 275:4,7 308:14
<b>post-processing</b> 81:15	<b>presenting</b> 108:11 321:22	<b>primals</b> 178:21,23 179:1,10 180:5, 16,22 181:9,10,19,24 187:8
<b>potent</b> 252:6	<b>press</b> 332:2	<b>primary</b> 45:1 62:10 321:2
<b>potentially</b> 197:21	<b>pressure</b> 196:11 267:11 271:22 272:6 330:7 335:22	<b>principally</b> 58:24
<b>pound</b> 292:20 298:17,23	<b>presume</b> 89:9 169:21	<b>principals</b> 17:14
<b>pounds</b> 81:24 85:14 209:10 293:12	<b>presumes</b> 27:13 206:10	<b>prior</b> 11:23 125:4 142:11 167:2 183:1 195:4,7 280:17 298:22 337:17
<b>power</b> 134:20 135:2 138:3 143:7,15, 25 145:24 146:10 147:5,18 172:7 183:22 185:12 187:4 276:9 282:5	<b>pretty</b> 113:15 124:8 302:23 319:10	<b>priori</b> 251:23 252:4
<b>PPIC</b> 231:21,25	<b>prevailing</b> 134:21,22 147:16	<b>private-label</b> 294:20
<b>practice</b> 6:23 10:24 319:18	<b>prevented</b> 138:7	<b>privy</b> 316:10
<b>preceding</b> 214:22	<b>previous</b> 22:10 70:3 119:8 159:8 298:1	<b>problem</b> 11:20 105:12 155:2 219:5, 24 320:11
<b>precise</b> 103:1 174:25 177:22	<b>previously</b> 127:2 139:10,17 160:7	<b>problematic</b> 24:14 26:19
<b>precisely</b> 64:10,14 102:18 161:5,24 307:6	<b>price</b> 4:10 37:17 41:7 53:25 57:14 60:10 66:20 68:1,9,11 70:20 76:11 85:3 86:1,7 87:3 88:13,14,19,21,22 89:7 90:2,5 92:9 97:9,11 98:3 105:20 106:15 107:4,16,19 108:5,18,22 109:8 126:16 128:6 129:19 130:5,9, 11,16 131:9,14,19,22,23 134:21,22, 23,25 135:3,10,17,20 136:6 142:15 148:9 162:1 166:19 176:20 177:2,24 181:25 184:13,16 190:9,17 192:9 194:6 197:17 201:21 204:13 211:3,11 216:4 217:12,13 219:7,8 220:1 223:3 226:9 242:7 245:4,23 250:22 254:21 265:24 267:3,5,8,14 268:1,13 272:4, 23 274:10 280:16 282:4 284:14 287:9,15,17,24 288:1,9,12 289:4,5,8, 10,11,16 292:6,8,10,19,20 293:14 299:12 302:17 304:21 306:14 307:1, 19,22 308:4,11,14 312:24 317:16 318:20 320:6,17 321:2,14 322:19 332:8 334:6,11,18 337:1	<b>problems</b> 155:10 219:11 301:2
<b>predicted</b> 287:14 288:3,9 289:4,5,8	<b>price-fixing</b> 27:19 28:11 32:13 33:13 36:4 37:17 39:17 57:15 305:10, 12	<b>proceedings</b> 4:1 5:2 347:5
<b>predicting</b> 195:3 284:13	<b>price-making</b> 312:24	<b>process</b> 16:1 242:11
<b>prediction</b> 247:10,13 249:18 287:23 289:16		<b>processed</b> 76:8 81:15 130:21
<b>predicts</b> 346:6		<b>processing</b> 75:16,20 80:10 82:18,19 97:19,21 102:1 129:10 133:13 135:22
<b>preliminary</b> 12:2 70:17 73:17		

137:2 161:9 175:23 176:11,17 183:23  
187:22 252:12,18 257:4 258:15,25  
259:14 273:12

**processor** 75:13 77:2,14 89:6,10  
178:16 181:15 182:2 187:14,16  
243:19 270:4 280:15,20,25 281:16  
285:7,10,11 308:18

**processor-product** 279:24 280:2,9

**processors** 129:11 180:24 238:15  
312:13

**procompetitive** 27:1,15 28:1  
204:15 243:25

**produce** 57:19 70:19 102:3 127:6  
128:7 134:20 137:16 141:5,18,24  
142:6 143:5 147:21 172:17 283:13

**produced** 82:10,23 99:6 113:10,12  
114:6,8 116:2 117:5 120:8 125:23  
129:3 134:4 142:18,22 150:10  
207:11,24 212:9 240:13 241:11  
289:22

**producer** 85:2,4,19,20,22 88:9,12,18  
90:12 91:13,21,25 92:3,18 93:12,20  
94:4,6,18 101:15 108:23 109:7,15  
110:5,10 111:13,16,18 114:22 127:6,  
21 134:23 231:20 234:1 286:9

**producer-sold** 113:2 115:14,24

**producers** 72:11 77:1 83:25 87:19  
89:15,21,24 91:1,6 95:7,25 97:2,22  
98:12 99:8,17 101:11 103:4 113:13  
114:7,21 115:23 116:2 117:5 120:8  
124:6 125:4,12,24 131:21 132:22  
133:9 134:14 138:8 145:25 146:20  
154:8,10,17 155:2,14,18 156:1,9,10,  
18 157:13,19 158:18,22 159:11  
160:4,6,10,15,21 161:17 162:7  
168:12 172:17 205:24 207:22 208:4,  
14,20 209:1,14,19,24 210:2 232:8  
234:19 240:20 242:1

**produces** 87:18 89:2 115:13 179:23,  
25

**producing** 92:16 111:13 141:15  
142:14 286:20 315:6

**product** 12:15 17:14 143:11 190:9  
193:9 200:15 219:14 229:13 230:8  
270:4 279:25 280:21,23 281:16,22  
284:7,12 285:4,5 290:15,16 291:2  
294:6,11,23 297:12 298:8 299:3,9  
308:1 324:16 328:3

**production** 40:19 75:20 90:25 92:3,  
20,23 93:1 95:8 96:1 98:22,23 102:21  
131:22,25 132:12 133:8 137:7,20,21,  
22 138:4,9 141:20 146:4 148:17

157:20,25 158:1 159:9,18,22 165:22  
168:6 169:12 172:21 178:16 190:4  
211:25 212:5,14 215:23 216:1 219:2,  
17,25 220:4 221:20 232:22 234:18  
236:19,22 237:8 255:5 262:21 329:8,  
9,14 330:2,5,12,16,18 333:10,11,15,  
23,24,25 335:14,15 337:7

**Production-packer** 4:12

**productivity** 287:1,5,7

**products** 39:4 41:14 42:17 46:23  
47:23 48:14 66:1 188:1,9 194:6 217:7  
223:10,16,21 226:20,21,22 227:19  
240:21 248:22 249:12 253:16 274:8  
284:17 285:8 289:23 290:9,10,17,18,  
22 291:2 293:15 294:20 296:4 299:7  
307:19 334:7,9,11,12,13,15,19,22

**Professor** 121:23,24 125:20 271:1,3

**profit** 164:8,12 202:6,7 304:21

**profit-making** 67:15

**profitability** 90:11,14,25 91:5 92:21  
93:11 96:21 158:18 159:16 164:15  
165:15,21 166:11,13,19 167:18  
168:3,7,13 237:12,16

**profitable** 93:13 167:6 191:2,4  
194:11

**profiting** 320:12

**profits** 20:17 88:1 129:15 135:16,18,  
23 165:1,2

**progression** 31:8 166:10

**project** 193:4

**projected** 102:24

**promote** 224:23 265:18

**promoted** 223:9

**promoting** 223:20 224:8 225:9  
226:13

**promotion** 224:15 296:19

**promotions** 296:21

**prong** 302:22

**prongs** 302:20

**pronounce** 227:17

**proof** 63:7 226:3 227:9

**prop** 324:17

**properly** 203:6 260:12

**proposition** 153:7 238:21 319:10

**prospective** 313:5

**protection** 6:23 31:4

**provide** 65:1 144:14 150:8 183:12  
296:24 310:13 319:19

**provided** 53:2 155:8 193:20 240:8  
285:18 307:18 320:6

**provider** 99:1,2

**providers** 169:13 259:20

**providing** 67:15

**prudent** 172:20

**public** 115:3,5,7

**publish** 108:7

**publishes** 308:13

**pull** 13:14 14:1 18:8 139:6 151:24  
194:23 328:25

**pulled** 250:25

**pulling** 306:24

**pun** 272:13

**punish** 309:9

**punishment** 303:25

**purchase** 71:3 74:8 106:20 109:1,2,  
4,5,6,13 110:1,9,13,17,18,19,20  
111:3,6,8,9,10,11 115:15 123:10  
132:3 134:3 136:3 178:21

**purchased** 85:1 99:7,16 106:21,25  
126:13,15 127:5 129:20 299:24

**purchaser** 276:2,13,23,24 277:14,16  
280:4 281:7 293:21 294:16 297:9  
298:19

**purchasers** 81:16 248:22 249:12  
277:6,9,23

**purchases** 85:7 110:3 116:13  
180:22

**purchasing** 131:20

**purported** 239:25 303:17 309:6  
310:8 326:15 339:9

**purporting** 204:1

**purports** 203:13

**purpose** 132:5 144:10,11 225:5  
272:17 323:3

**purposes** 25:5 102:13 337:20

**pursue** 301:9

**push** 76:14 116:10 282:4

**pushing** 8:22 143:10 337:18

**put** 13:7 24:18 51:24 60:17 76:9,22  
109:23 135:14 177:6,7 184:2 185:1  
186:5 211:9 226:5 265:20 267:10  
269:10 271:22 272:6 280:18 311:19  
328:12 330:6 333:3 335:22 342:25

**putting** 80:11 104:3 219:6 337:15

**PVD** 182:15,18 183:25 184:4,8 185:3,  
4,19,23,25

---

**Q**

---

**Q&a** 142:25

**qualitative** 28:15 30:22 33:17 35:8  
38:25 45:2,17 53:21 62:24 191:16,20  
204:21 205:8 257:19,25 258:22 264:1  
266:6,7 317:2 326:5

**qualitatively** 191:25

**quality** 218:10,17,21

**quanties** 219:6,9,15

**quantified** 40:18

**quantify** 8:25 9:2 10:12 11:7 12:8,23  
13:19,25 14:10,13 204:1 243:16  
319:14

**quantifying** 8:12,14,18 10:8

**quantitative** 28:16 33:17 35:9 39:1  
45:3 53:24 245:1 257:22 264:10  
265:22 266:13 317:3

**quantity** 168:25 212:7

**quarter** 80:22

**quarterly** 168:23 169:21,25 170:3

**query** 187:23

**question** 14:8,16 15:3,6,9,23 16:8  
22:8,10,13 27:13,16 28:25 35:18  
38:16,19 45:25 49:11 50:8 51:23  
55:23 61:23 63:21 68:24 70:3 72:4  
73:8 78:8,12,20 86:25 91:20 99:21,25  
102:14 110:2 114:17,19 117:25  
119:4,7,8,11,17 137:18 147:8 160:20  
162:5,6 167:10 169:11 179:3 180:19  
181:16 188:17 198:11 212:23 233:21,  
22 237:6 241:17 242:17 244:8 254:6,  
22 256:13 257:10,15 259:18,21 263:3  
267:2 277:8,14 278:10 282:1 298:22  
311:23 312:1 315:9 325:12 327:16  
341:10 342:2,19

**questioning** 27:16 114:11 248:20  
303:24

**questions** 15:16 51:22 73:16 89:9  
116:8,9,15 142:11 199:4 210:5

266:25 285:15 341:11,15 342:17  
346:22 347:2

**quibble** 325:11

**quick** 4:12 123:16 152:15 297:15  
343:7

**quickly** 157:25

**quote** 196:8,12 245:3,8 266:23

**quote/unquote** 46:21 47:8 49:16,24  
50:21 261:10 305:24 315:17 318:16  
321:23

**quoted** 195:12

**quotes** 55:1

**quoting** 58:7

---

**R**

---

**ractopamine** 221:13,14

**raise** 43:16 54:20 56:22 58:21 67:11,  
13,16,17 88:9 93:13 99:17 100:2  
129:19 130:16 133:12,21 135:15,20  
203:9 212:21 317:6,11 318:23 322:5

**raised** 72:1,9 98:11 123:22 124:6  
125:4,11 127:18 131:8 162:24 206:6  
208:5 211:3,24 221:16,18 223:10,21

**raises** 91:16 197:8

**raising** 85:17,18 88:9 90:10 94:20  
97:23 146:22 147:10 158:19 286:11  
307:10 322:19 338:22

**ramifications** 224:5

**ran** 278:10

**range** 173:14

**rank-and-file** 286:8

**ranked** 313:3

**ranking** 307:14,23 308:1

**rate** 90:19 104:24 182:23,25 183:11,  
12 184:1,4,17 185:2,15,22,24 186:12  
206:2 215:6 293:9 295:15,19,21,22  
296:15 346:12

**rates** 293:7 294:10,19 295:9 296:3

**ratio** 183:11 324:19

**rational** 20:1,15 21:22 22:15 23:10  
26:8,17 28:4 92:19 95:6,25 188:9  
189:5 192:2 197:3 202:14 203:15  
204:5

**rationale** 321:2

**ratios** 293:22

**reach** 183:14 184:15 251:25

**reached** 54:11 319:16

**reaching** 46:16

**react** 159:22

**reaction** 138:16

**reactions** 340:15,16

**read** 22:9,10 26:11 47:15 104:2,3  
107:10,11,13 113:23 117:25 118:12  
119:8 123:16 139:21 141:22 153:10,  
13 232:24 240:2 259:1 330:1,4  
341:16 344:3 346:25

**read-through** 346:16

**reader** 206:10

**reading** 23:7 149:23 233:1 343:4

**reads** 346:5

**ready** 103:14 139:20 151:15 181:18  
329:25

**real** 123:16 217:25 218:3 233:12,22  
313:17

**reality** 156:19 165:21 249:14 281:20

**realize** 12:22 72:8 284:25 346:18

**realtime** 32:11 47:1 148:23 165:10  
308:15,20

**rear** 85:14

**rearing** 87:15 154:13

**reason** 38:6 156:2 247:12,18 251:23  
252:4 259:24 265:17 278:20 298:18  
303:2

**reasonable** 6:17,20 61:17 92:2,23  
94:5 95:3 112:22 125:6 126:3 157:10  
158:1 178:15 192:2 201:3,13 225:19  
234:23 336:4

**reasoning** 64:8

**reasons** 27:2,12,15 92:25 97:2  
172:2,9,15 204:16 236:25 237:4  
252:8 263:3 276:16

**recall** 10:16 13:9,10,15 26:10 47:16  
51:12 52:2 73:11 74:12 78:14 84:5  
116:14 136:16,21 148:23 149:1  
206:25 222:10 313:23

**received** 233:7,9 234:25

**receiving** 242:3

**recently** 47:15 143:24 144:17,23

<b>recess</b> 84:15 163:14 238:4 297:20 341:5	134:11 142:15 157:7 159:16 160:25 169:7,17 170:6 171:10 172:2,8 173:15 215:20 229:14 230:22 236:7 259:12 261:1	<b> relayed</b> 146:12
<b>recognition</b> 217:6 304:15	<b> reductions</b> 62:20 66:15 160:24 250:21 261:10	<b> release</b> 69:5 332:3
<b>recognize</b> 17:2 24:10 28:2 70:9 127:12 140:13 183:6 187:25 223:17 331:6	<b> refer</b> 32:4 72:10 195:14 238:11 254:25 278:3	<b> released</b> 144:18
<b>recognized</b> 304:20	<b> reference</b> 65:7 154:2 156:5 198:24 235:6,9 241:23 249:25 271:17 276:18 291:6	<b> relevant</b> 76:9,23 78:25 80:9,11 81:11,13,18 82:7 83:25 90:6 97:18 98:15 101:25 104:21 130:4 131:6,14 132:16 133:5,22 134:2 135:21 141:15 161:8 169:4 175:22,23 176:1,17 181:22 186:14,24 212:4,23 242:10,20 254:6 256:13 259:13 271:23 272:4,7 284:25
<b>recollect</b> 314:3	<b> referenced</b> 330:10	<b> reliability</b> 272:9
<b>recollection</b> 50:11 199:24 291:19	<b> referencing</b> 199:5 276:17	<b> reliable</b> 11:15 14:1 16:3,24 17:14 24:15
<b>recommendation</b> 234:4,16,17	<b> referred</b> 26:8 156:7 227:12	<b> reliably</b> 14:5
<b>reconciling</b> 225:12	<b> referring</b> 57:7 89:20 153:24 202:17 203:20 231:18 258:16 274:14 306:2	<b> reliance</b> 106:3
<b>record</b> 5:4,12,23 12:23 14:12 16:9 29:3 39:9 40:4 43:5 45:16 46:7 51:5 62:4,25 63:21 66:9 70:10 71:15 84:14,18 87:5 113:24,25 116:25 118:1 141:16 143:18 160:8 163:13,17 175:2 188:14 189:16 193:12 199:18 205:2 207:5 211:5 238:3,8 247:25 252:4 258:1,4,6 263:13,25 264:12 266:1,5 277:11 297:19,23 302:15 319:17 326:10 330:4 340:14 341:4,8 342:25	<b> refers</b> 121:13 305:3 331:22	<b> relied</b> 79:16 84:3 88:6 144:15 152:24 228:17
<b>record-high</b> 154:9	<b> refile</b> 30:2	<b> rely</b> 68:8 322:22
<b>records</b> 78:5 209:7	<b> reflect</b> 70:17 195:25	<b> relying</b> 145:12 178:13 199:25
<b>recover</b> 335:6	<b> reflected</b> 165:12	<b> remainder</b> 195:8
<b>recovered</b> 272:4	<b> reflects</b> 170:5 281:20	<b> remaining</b> 125:2
<b>redo</b> 255:20	<b> refocus</b> 256:21	<b> remarkable</b> 214:20
<b>redound</b> 137:16	<b> refrain</b> 71:2	<b> remember</b> 140:9 144:21 149:18 163:22 189:10 194:17 199:7,9,21 315:9
<b>reduce</b> 43:3,15,23 44:10 45:4,9,22 46:4 52:25 53:8,11 54:19 55:11 56:9, 22 59:9,17,18,25 61:20 62:11 65:4,8 66:15 67:2 70:25 71:12 77:11 80:7,16 81:8 91:14 92:3,20,23 94:12,18 104:20 128:16 130:25 131:1 135:17 138:24 172:20 214:16 222:1 232:20 259:19 261:12,18 262:9,20,23 265:5, 12 317:7 339:3	<b> refreshes</b> 199:23	<b> remembering</b> 194:8
<b>reduced</b> 54:15 61:1,9,25 63:11 79:23 101:8 128:22,23 161:16 175:7 189:15 191:13 219:8 223:4 229:15 259:3 261:24 336:25 338:23	<b> regard</b> 34:10 87:22	<b> remote</b> 5:6
<b>reduces</b> 80:12 81:10 93:1 97:24 137:20	<b> regime</b> 306:15	<b> remove</b> 39:15,25 40:3 41:9 56:17,19, 24 57:9 185:13 229:8 279:15
<b>reducing</b> 42:21 45:21 81:3 101:17 138:12 172:11 231:17 339:9	<b> regions</b> 297:5	<b> removed</b> 60:13 229:7
<b>reduction</b> 36:11 42:25 56:4,12 59:24 62:7,9 63:13 65:15,17,22 66:7,10,12, 23 67:19 75:14,25 79:21,22 80:1,15 81:2 95:2 100:10 102:8 129:1,2 131:8	<b> regressions</b> 276:20 291:23 295:5	<b> removing</b> 60:7
	<b> reject</b> 45:24	<b> repeat</b> 289:15
	<b> rejected</b> 23:16,19 340:2	<b> repeats</b> 165:3
	<b> rejects</b> 22:25	<b> replace</b> 242:1
	<b> related</b> 90:15 176:2 345:7	<b> replacement</b> 243:23
	<b> relates</b> 144:5 239:25	<b> report</b> 4:9 6:1,8,12 7:3,10,14,19,23, 24 11:6 21:16 28:12 32:4 33:24 36:14 37:2 42:24 43:5,19 46:8,25 47:3 50:12 52:14 54:16 57:20 65:12 78:10 84:4 87:14 90:23 96:5,16 105:19 107:14 112:10 113:1,9 114:6,20 115:10 116:1,3,5,19 117:12,14 119:12,18,19 120:10,16 128:2 135:5 140:7,10 144:11,22 145:7 152:24 153:10 172:5 180:11 181:21 189:20,

24 190:15 191:23 193:20 194:20 199:17,20,21,22 226:3 238:12 243:22 244:22 245:20 248:12 258:20 259:1 266:20 274:15 300:11 303:21 304:8, 10,14 307:15,18 309:20 310:3,25 311:6,11 312:4,7,23 315:15 317:23 321:1 322:23 323:4,10,15 324:3,14 325:1,2,22 327:2 329:5 331:22 341:17 342:9,14,15	<b>response</b> 49:13 101:16 103:5 138:11 147:2,16 148:2 314:6 <b>rest</b> 240:7 275:25 <b>restaurant</b> 284:20 <b>restraint</b> 9:1 39:13,23 40:2 43:10,14 56:17 60:12,13,20 100:25 101:4 189:12 191:10 <b>restraints</b> 332:15 <b>restrict</b> 97:22 128:16 253:17 332:25 338:9 <b>restricted</b> 258:25 <b>restricting</b> 253:5 <b>restriction</b> 221:13,14 <b>restrictions</b> 221:6,10 <b>rests</b> 141:6 142:6 <b>result</b> 19:2 172:8 237:18 261:4 284:23 <b>resulted</b> 8:5 157:8 226:14 239:16 298:24 <b>results</b> 269:23 <b>retail</b> 91:7 292:6 296:25 297:2 299:13 <b>retailer</b> 277:2 294:5,21 299:18 327:6, 25 <b>retailers</b> 296:17 <b>retailers'</b> 296:18,22 <b>retained</b> 10:3 11:11 12:8,20 13:17 14:10 16:6 <b>retaliate</b> 304:3 <b>retention</b> 11:23 14:9 15:10,11 <b>revenue</b> 143:11 <b>reverse</b> 29:25 <b>reversed</b> 14:6 <b>review</b> 44:14 45:16 51:24 53:21 62:24 67:24 193:12 195:23 259:10,11 319:17 321:7 341:15 <b>reviewed</b> 29:3 46:6 47:22 48:13,24 77:18 78:5 84:3 87:6 88:5 122:24 134:9,12 143:15 200:9 265:1,9 315:14 321:20 <b>reviewing</b> 8:2 342:9,14 <b>revise</b> 49:11 <b>revisit</b> 244:12 256:1 334:5	<b>RFP</b> 327:7 328:13 <b>rib</b> 273:24 <b>ribs</b> 179:17 <b>RICHARD</b> 3:9 <b>rig</b> 337:16 <b>right-hand</b> 219:7 220:1 229:16 287:18 288:15 295:5 336:25 <b>rigors</b> 332:5 <b>ring</b> 312:13 <b>ringing</b> 152:21 <b>ringleader</b> 44:19 <b>rise</b> 211:10 <b>risk</b> 241:2 <b>RISSMAN</b> 4:3 9:12,24 10:14 11:24 12:25 13:4 14:15,23 15:4,12,17 16:18 17:10,24 19:7,21 20:4 21:25 23:24 24:16 25:8,19 26:20 28:6 33:6,8,11 37:24 38:10 41:16 42:18 44:1,22 45:14 46:5 47:10 48:9,20 49:3 50:1,6, 23 51:7 52:12,21 53:16 54:8,24 55:16,25 58:4,10 59:10 60:1 61:2 64:20 65:19 68:3,21 69:3,15 70:6 71:5 73:1,14 74:10,18 75:4 76:4,19 77:3 78:2,17 79:2,6,14 83:7 84:8 86:9,17 88:20 92:4,24 93:16 94:8 95:9,15 96:2,14 97:25 98:18 100:12 101:18 103:7 105:8 107:24 108:8 109:16 112:13 113:14,21 114:9,16 117:16,23 118:3,8,19,23 119:15 123:24 126:1 127:22 128:8 129:5,21 130:18 132:23 134:6,17 135:12 136:8 137:8,24 138:13 139:9 140:16 141:12 146:24 147:14,24 148:10,18 149:16 150:18 151:4,11,20 152:3 153:21 155:4,20 157:22 158:5 159:13 161:2, 19 162:11,25 163:10 165:25 167:21, 23 168:15 172:12,23 173:17 178:5,17 182:3 189:9 190:11 191:7 193:10 199:3 200:4,17 201:10,15 203:18 204:7 208:6,23 209:15 210:3,14,24 211:14 212:1,10,18 213:16 214:11 217:9 219:21 222:7 223:22 224:10 225:14,16 228:8 230:10 233:5,14,19 234:21 237:2,13,25 241:7 242:16 244:1 245:12,16 252:16 255:9 259:7 260:2 263:8,21,24 264:21 274:11 302:9 304:17 306:3 310:10 314:14,22 315:18 316:18 317:20 319:23 320:18 321:4 322:10 323:17 324:6 325:3,9 326:16,22 327:10 328:9 329:17,22 330:13 331:1 332:10 333:12 335:18 338:12 339:16 340:11,22 342:18,21 346:23
--	---	--

rival 108:14 116:11,12,22,23 120:1 318:25 <b>rival's</b> 302:14 <b>rivalry</b> 132:6 <b>rivals</b> 120:3 137:7,17,22 303:23 319:8 324:15 338:14 <b>River</b> 3:23 <b>role</b> 309:5 313:9 314:10 <b>Ron</b> 121:8,23 <b>room</b> 232:9 <b>roughly</b> 183:14 201:4 <b>routed</b> 185:9 <b>rparker@gibsondunn.com</b> 3:10 <b>rude</b> 233:15 <b>rule</b> 28:19 34:16,24 35:12 38:6 92:6,8 111:17 233:8 <b>ruled</b> 29:20 30:21 <b>run</b> 74:24 76:1 80:13 81:8 181:5 187:20 260:23 265:10 275:4,6,12 276:1 277:12,15,25 279:2 296:14 344:19 <b>running</b> 228:22 276:20 290:3 296:19 <b>runs</b> 170:20 <b>Russia</b> 219:2	<b>scared</b> 158:24 <b>scenario</b> 156:17 328:17 <b>scheme</b> 21:5 203:5 265:7 <b>school</b> 271:9 <b>SCHWINGLER</b> 3:5 <b>scope</b> 173:2 192:7 224:24 228:14 <b>screen</b> 105:14 151:24 164:9 245:17 <b>screening</b> 16:1 <b>scroll</b> 111:22 141:1 <b>Seaboard</b> 3:2 196:6,21 231:14 232:1 235:12,21 236:3 252:24 311:7 331:23 332:7 338:6 <b>seasonality</b> 291:12,14,16,20,23 294:25 298:8 <b>section</b> 26:25 27:4,22 28:22 46:9 65:13 66:8 78:5,9,10 84:4,6 87:14 91:4 96:5 104:4 135:5 153:12,16 170:21 174:14 188:25 200:6 216:3 231:1,5 239:8 257:20,25 258:19 261:16 264:1 311:2,6,10 312:6 322:21 343:20 <b>sections</b> 47:14 52:1 <b>sector</b> 141:5 <b>secular</b> 171:13 216:25 218:7 222:13 282:23 <b>seeking</b> 250:8 <b>seized</b> 323:2 <b>seizes</b> 321:9 <b>seizing</b> 324:8 <b>selective</b> 272:24 274:5 <b>self-interest</b> 26:18 28:5 197:3 <b>sell</b> 88:12 293:20 <b>seller</b> 281:18 295:11,14 <b>seller-buyer</b> 109:9 <b>sellers</b> 111:22 112:4 <b>selling</b> 89:8 118:14 135:21 180:16 191:2 207:25 327:25 <b>sells</b> 92:1 <b>seminal</b> 271:6 <b>send</b> 34:6 258:19 305:8 312:6 <b>sending</b> 208:11 <b>sense</b> 41:19 94:12 130:15 180:25 182:1 189:1 218:18 292:14 323:13	<b>sensitive</b> 32:14 36:6 56:23 59:1,20 60:14 68:7 229:20 248:7 300:13 318:2 320:5 <b>sensitivities</b> 275:12 <b>sensitivity</b> 274:14 278:15 279:5 <b>sentence</b> 126:12 206:9 207:19 235:16 286:16 345:5 <b>separate</b> 10:3 23:22 47:13 51:21 56:16 67:1 71:18,20 101:3 176:4 182:24 185:5 270:18 275:4 276:1,20 277:13,15 294:9 296:2,24 337:25 <b>separately</b> 337:12 <b>September</b> 145:15 <b>sequence</b> 250:11 <b>series</b> 116:8 166:22 186:2 251:11 283:2 285:18 323:20 <b>served</b> 32:15 187:13 284:21 <b>serves</b> 187:15 <b>service</b> 277:3 <b>session</b> 51:25 151:3,9 342:5,6 <b>set</b> 57:12,16,24 60:8,10 61:7 125:21 134:25 161:7 179:1 215:14 226:1 228:23 287:3 295:21 332:16 <b>sets</b> 124:16 276:9 <b>setting</b> 76:10 119:21 155:10 207:5 214:2 228:12 301:16 <b>share</b> 57:3 91:7 138:22 <b>shared</b> 128:5 129:12 <b>sharing</b> 36:5 50:14 56:22 58:25 59:19 60:14 229:19 306:17,19 319:7 320:9 <b>sharpen</b> 328:2 <b>sheep</b> 106:9 <b>SHEET</b> 4:4 <b>shift</b> 74:25 76:1 80:15 81:8 216:22 261:21 265:10 284:1 <b>shifts</b> 80:1 258:17 259:3 260:22 337:22 <b>shipped</b> 190:5 <b>short</b> 80:13 <b>short-lived</b> 159:21 <b>shoulders</b> 179:2,17 <b>show</b> 17:19 18:24 31:9 65:13 115:13 146:14 164:16 203:13 215:22 266:8
---	---	--

290:25 311:22 323:24	251:8 265:8	<b>snapshot</b> 216:6
<b>Showed</b> 153:13 225:22 283:2 314:6, 7	<b>single-firm</b> 27:22,23	<b>snout</b> 180:3
<b>Showing</b> 48:13 49:23 85:7 87:18 114:24 125:21 140:22 143:18 166:11 171:21 191:20 308:13	<b>sir</b> 120:22 152:7	<b>snouts</b> 228:4
<b>shown</b> 166:22 272:21,22 310:5	<b>sit</b> 220:24 226:25 236:2	<b>Society</b> 29:14,17
<b>shows</b> 45:17 124:20 129:7 148:21 154:23 213:8 248:13 264:10 269:17 320:3 323:9 344:13 345:1	<b>site</b> 144:21	<b>softened</b> 154:8
<b>shrinking</b> 276:9	<b>sitting</b> 47:5,12,21 48:10 73:5 78:7,15 83:20 84:6 86:3 87:20 98:14,19 99:9, 25 100:5 101:12 102:5,17 104:10 117:10 126:6 127:1,8,10,25 132:17 140:4 172:14 187:16 189:20 194:18 196:18 216:11 222:10 224:4 230:5 234:25 269:9 295:2 304:11 311:4 328:11	<b>sold</b> 98:10,12 113:3 114:22 115:13 120:16 124:7,17 125:10 130:22 137:2 197:10 201:7 259:15,16 284:19 292:12 294:6 296:4 299:10
<b>shut</b> 253:23 262:1,4,14	<b>situation</b> 83:3	<b>solely</b> 141:6
<b>shutdown</b> 92:6,7 263:4	<b>Sixth</b> 3:3	<b>solve</b> 41:7 60:10
<b>shutting</b> 92:11	<b>size</b> 132:21 169:18 170:7 171:10 293:16	<b>someone's</b> 324:19
<b>sic</b> 121:25 183:7 231:23	<b>skewed</b> 293:22	<b>sort</b> 64:7 80:2 120:17 150:17 197:24 202:2 269:20 312:15
<b>sick</b> 273:13	<b>skills</b> 16:14	<b>sorts</b> 97:16 219:23 287:7
<b>side</b> 219:7 220:2 229:17 281:10,11 287:18 288:15 293:20 295:5 336:25	<b>skipping</b> 13:22	<b>sought</b> 311:25
<b>sides</b> 281:18 282:9	<b>SKU</b> 298:21,23 299:21,22	<b>sound</b> 25:3 227:19 242:25
<b>sign</b> 267:3,14,25 268:6,11,23 269:1, 17 271:15,25 273:1,4,15 335:25 346:25	<b>slash</b> 282:11	<b>sounds</b> 6:16 66:25 187:16,21 194:16 198:12 207:15 237:25 255:17
<b>signed</b> 213:9	<b>slaughter</b> 71:25 72:5,19,23,25 74:4, 9 75:25 76:2 80:6,16 82:20,24 83:1,5 106:8 181:5,18 183:15 184:15 264:18	<b>source</b> 150:1,6 294:11,12
<b>significant</b> 105:3 138:22 164:21 170:6 172:7 183:7 224:7 227:11 228:3 252:12 270:14 272:11 273:20 279:19,20 333:20 335:3,14 336:1 337:22	<b>slaughtered</b> 65:25 75:1 76:16,18,21 82:3,25 98:11 125:10,22 180:6,18 181:10	<b>sourced</b> 98:25
<b>significantly</b> 255:4 338:10 340:8	<b>slaughtering</b> 71:2	<b>sources</b> 144:12 235:22
<b>signs</b> 268:9 270:19	<b>slaughters</b> 99:6 100:3 127:18 179:9	<b>South</b> 3:3 239:13,22
<b>similar</b> 275:1 345:7	<b>slice</b> 269:15	<b>sow</b> 56:4 59:23 60:25 61:9,24 62:19 64:19 72:14 83:19 100:10 101:9,16, 17 102:4 103:5,25 104:1 128:16 129:1 130:25 131:8 138:8,12 149:8 160:24 161:15 162:8 169:8 170:7 172:3,10,19 173:16 175:7 230:22 231:11,12,17 232:20 236:6 241:24,25 243:1 250:21 286:25
<b>similarly</b> 93:12	<b>slices</b> 272:25	<b>sows</b> 59:25 60:25 66:15 77:21 91:15 102:8 103:17 104:9 134:15 141:7 142:7 168:25 172:21 235:7,10,13,21 236:4,12 237:1,11 242:1,8 243:24
<b>simplest</b> 279:15	<b>slight</b> 171:6	<b>soybean</b> 286:7 287:1
<b>simply</b> 115:23	<b>slightly</b> 249:15	<b>spanned</b> 247:20 250:17 251:9
<b>simulate</b> 192:13	<b>slow</b> 75:18,19	<b>spare</b> 189:21
<b>simultaneous</b> 14:21 93:5 100:14 112:18 145:1 179:5 196:3 232:13 242:13 253:8 269:3 339:4	<b>slowed</b> 77:15	<b>speak</b> 44:4
<b>Singer</b> 4:2,9 5:7,16,24 6:2,8,11 12:19 15:22 39:20 50:10 114:2,15 119:5 139:19 150:22 152:11 163:19 164:11 233:21 297:25 322:15 342:18	<b>small</b> 346:3	<b>speaking</b> 57:5 82:15
<b>Singer's</b> 20:12	<b>smaller</b> 42:1	<b>speaks</b> 43:6
<b>single</b> 44:7 46:19 47:7 54:19 56:21 71:11,21 100:24 203:8 230:7 250:16	<b>Smithfield</b> 3:7 99:4 103:6 127:17 138:11 149:8 194:15 195:3,13,22 230:22 231:3,8 232:2 235:6 236:14 242:7,24 262:14 343:12	<b>special</b> 159:5 272:12 281:7 335:5
	<b>Smithfield's</b> 102:8 104:7 262:20 263:19	<b>specific</b> 37:7 50:4 83:22 111:23 246:25 250:2 264:17 273:23 283:7 315:6 316:13 317:14,16

**specifically** 8:17 142:20 185:8  
231:19 233:2 261:19 285:24 334:7,21  
336:12  
**specification** 249:16  
**specifications** 273:2  
**speculation** 134:7 323:18 327:11  
340:12  
**spelled** 243:12 317:23  
**spend** 342:8  
**SPF** 236:1  
**SPF00294998** 238:25  
**split** 101:13  
**splits** 100:1  
**spot** 109:6 123:3 239:7 269:11  
**spotted** 343:5  
**spread** 146:15,18  
**spreadsheets** 305:15  
**spring** 239:15 329:15  
**squeeze** 143:19 145:25  
**squeezed** 172:6  
**squeezing** 144:1  
**stability** 300:25  
**stable** 303:5  
**stacked** 251:12  
**staff** 48:16 273:12 341:14,19  
**staffer** 153:13  
**staffers** 87:6  
**stage** 103:22 291:20 301:17  
**stand** 235:18  
**standalone** 54:13 56:17  
**standard** 16:17,21,25 20:3 21:24  
22:18 29:8,10,24 38:6 282:22  
**stands** 86:22  
**start** 7:12 174:15,25 183:4 269:21  
334:25 335:7  
**started** 229:19 315:6  
**starting** 18:22 27:14 238:14 332:4  
**starts** 20:10  
**Stat** 189:24  
**state** 5:22 9:19 87:11,18 285:18  
286:24

**stated** 119:1 180:1  
**states** 18:23 89:16 101:10 132:9  
169:1 207:4,11,24 208:15 209:2  
221:19 226:21 227:4 259:17 262:14  
**statistic** 104:5  
**statistically** 270:14 272:11 273:19  
279:18,20 336:1  
**Stats** 32:15 36:6,18 44:9,15,18,25  
48:2 50:14 52:11 53:3,7 56:24 57:4,  
11,18,23 58:2,14 59:1,21 60:16 67:15  
69:6 70:10 108:10 150:7,13 191:22  
193:19 202:3 229:19 230:2 238:15  
248:11 300:3,4,23 302:3,15,25  
304:14,20 305:3,7,23 307:15,18  
308:2 309:5,13,24 310:13,25 311:8,  
14 312:4,14,19,22 313:20,24 314:2,6,  
10,18 315:6 317:10,16 319:20 320:15  
321:1,7,22 322:17,23 323:1,6,14  
324:3 326:12 327:8,17,23 328:7,12,  
16 337:15  
**Stats'** 255:14 308:23 309:16 311:16  
**statute** 335:1  
**stay** 92:15 112:1  
**stayed** 40:15  
**stays** 206:2  
**steadily** 172:10  
**steady** 213:10 218:7  
**steaks** 284:22  
**stealing** 318:18  
**STENOGRAPHER** 69:25 118:6  
**stenographic** 5:12  
**step** 35:23 37:19 63:10 86:10  
**stepped** 239:15  
**Steve** 139:25  
**stick** 151:9  
**STINSON** 3:2  
**stip** 79:14 86:18  
**stood** 29:16  
**stop** 118:19 338:17  
**stopping** 103:4  
**stores** 296:25 297:5  
**stories** 219:24  
**story** 198:6 273:9 336:3  
**straight** 175:2

**straightforward** 274:20  
**strategies** 229:17  
**strategy** 77:9 198:2 238:17 240:19  
**Street** 3:3,17  
**strength** 241:25  
**stretched** 250:8  
**stretches** 323:7  
**strike** 70:3 182:21  
**strikes** 12:19  
**strokes** 32:12  
**stronger** 239:17  
**structural** 248:2 251:22 254:25  
255:1 336:18  
**studied** 16:11 104:14 132:6,18  
133:4,5 138:14,16 139:4 157:9,10  
166:6 175:15,16 181:13 182:6 213:1  
252:19 257:13 340:16  
**studies** 122:16 143:23 144:7  
**study** 4:11 121:7 126:8,16 139:22  
140:9,22 144:17 145:5 171:14 192:7  
204:11 224:5 228:15 278:25 296:17  
325:19 331:20  
**studying** 11:11 96:23 97:6,8,10,17  
145:16 169:11 213:25 228:15  
**stuff** 84:2 164:1  
**stumbling** 195:9  
**stupendous** 214:19  
**sub-bullets** 330:1  
**subgroup** 277:13  
**subgroups** 275:15  
**subheader** 106:19  
**subject** 20:2 21:23 22:16 55:22 56:1  
62:3 85:25 87:2 107:4 115:15  
**submit** 16:24 308:7 327:6  
**submitted** 7:3,10,13,19,23 114:25  
115:10  
**subscribe** 319:11 323:6,14  
**subscribed** 248:11,14  
**subscribers** 312:19  
**subscribing** 323:4,24 325:22  
326:12  
**subscription** 324:3 325:1

<b>subsequent</b> 173:16	136:13 143:10 147:18 203:9 258:3 332:14	<b>talk</b> 36:8 42:25 44:13 100:18 180:12 189:21 195:2 226:4 231:15 298:5 316:4 320:20
<b>subset</b> 269:16	<b>suppressed</b> 147:4 163:6 229:23	<b>talked</b> 67:22 222:12 283:1,11,13 338:2,21
<b>substance</b> 163:20,25	<b>suppressing</b> 148:9 190:19	<b>talking</b> 49:22 51:3 56:7 80:8 82:6,9, 17 93:19 138:1 204:8 206:17 231:13 270:24 277:10 299:9 343:24
<b>substantial</b> 138:21	<b>suppression</b> 102:20	<b>talks</b> 87:14 329:7
<b>substantiates</b> 189:1	<b>Supreme</b> 30:1	<b>tamp</b> 256:7
<b>substitute</b> 267:9	<b>surges</b> 239:14	<b>tamper</b> 254:1
<b>substitutes</b> 267:4	<b>surmise</b> 127:9 237:17	<b>tape</b> 151:18
<b>subtract</b> 287:13 288:1	<b>surprise</b> 168:11 216:16	<b>Tar</b> 262:14
<b>subtracting</b> 125:13	<b>surprised</b> 170:14 174:22 253:3	<b>targeting</b> 81:23
<b>successful</b> 311:3	<b>surprising</b> 273:1 312:8,18	<b>tautological</b> 12:12
<b>suffering</b> 236:16	<b>surrounding</b> 141:22	<b>tautology</b> 12:18
<b>sufficient</b> 88:19 159:22 310:1	<b>Suslow</b> 204:24	<b>teachings</b> 251:21 252:9
<b>suggest</b> 70:10 75:12 92:11 116:21 166:13 248:1 249:3 252:4 270:11 276:13,20 293:23	<b>suspend</b> 65:24	<b>technical</b> 173:9,10 219:5
<b>suggesting</b> 143:24 199:8 211:5 260:24	<b>suspicions</b> 197:9	<b>technique</b> 274:20
<b>suggestion</b> 248:3	<b>swapped</b> 305:14	<b>technological</b> 282:18 283:6,16,21
<b>suggests</b> 258:6 286:16 330:17	<b>swear</b> 5:14	<b>telling</b> 51:11 225:3,7 246:15 247:2 257:12 268:10 278:5 280:12 284:11
<b>Suite</b> 3:3,17	<b>swine</b> 106:9 110:18 111:9,24 112:2 123:6 156:7 157:2 171:11 218:12,25	<b>tells</b> 96:11 149:19 154:5 155:17 166:24 258:8,13
<b>summarized</b> 32:9 43:5	<b>swine-pork</b> 126:15	<b>temporarily</b> 65:25 158:25
<b>summary</b> 32:19 149:21	<b>swiping</b> 14:19	<b>temporary</b> 75:24 80:6
<b>supplied</b> 133:19 346:9	<b>sworn</b> 5:17	<b>ten</b> 59:15 214:14
<b>supplier</b> 282:11	<b>symmetric</b> 180:2	<b>tend</b> 165:22,23 167:19
<b>supply</b> 40:24 43:24 44:10 45:9,23 53:1,8,12 54:20 55:11 56:9 58:21,23 59:9,17,18 61:12 62:11 65:5,8 70:25 71:12 77:11 79:23 80:7,9,17 81:4,9, 10 82:1,9,15 96:24 97:3,14,24 101:8 104:21 105:3,4 106:15 131:1 138:24 142:5 147:6 161:1,22 175:20 176:16 191:13 202:20 214:17 219:13 222:1 253:6,15,18 256:7,8 265:12 273:9,11 284:1 316:15 333:1,19,20 337:22 338:10	<b>system</b> 122:14	<b>tens</b> 253:13
<b>support</b> 20:14 198:3 207:18,20,23 230:3 238:20	<b>T</b>	<b>term</b> 33:23 88:4 89:23 133:17 178:3, 10 184:20
<b>supported</b> 207:10,12 208:4 211:24	<b>Tab</b> 6:2 18:8,13,15 105:7 120:22 139:6 151:22 205:14 223:5 230:18 238:24 328:20 333:9	<b>terms</b> 38:22 88:1 184:20 207:16 283:12 297:10 309:2 316:16
<b>supporting</b> 207:14	<b>table</b> 102:19 124:16,20 148:20 149:1, 18 164:9,12 248:18 267:13,20 268:3 270:1 272:18 273:18,21 275:15 277:12,19 278:4 279:23 295:14 323:9 325:23 345:20,25	<b>test</b> 197:7,14 206:19 248:16 250:15 258:21 264:24 266:11 272:13 278:15 283:9 288:25 289:17 290:3 336:19
<b>supportive</b> 193:15 198:21	<b>Tables</b> 297:8	<b>tested</b> 255:6 287:11
<b>supposed</b> 33:19 214:9 221:23 226:15 229:11 230:21 264:20 323:15	<b>tacit</b> 34:17,25 35:11	<b>testified</b> 5:18 6:13 9:16 86:15
<b>supposedly</b> 212:14	<b>tail</b> 180:4	<b>testify</b> 10:11 23:5 49:6 73:3 96:19 260:4
<b>suppress</b> 58:20,22 133:12 135:3	<b>takeaway</b> 22:20 23:3	<b>testifying</b> 118:17,21
	<b>takes</b> 103:24 183:14 184:14	<b>testimony</b> 30:4 43:25 47:11 50:24 52:13,17 57:8 58:5,12 59:11 71:7 75:7 77:5 117:7,9,10 129:22 156:16

163:20 200:5 222:9 250:1 256:5 <b>testing</b> 247:22 <b>tests</b> 272:19 275:1 <b>text</b> 107:8 <b>textbook</b> 44:18 271:10,13 <b>textbooks</b> 271:7 276:19 <b>TFP</b> 235:25 <b>theoretical</b> 344:18 <b>theory</b> 21:4,19 22:24 23:1,12,13,18 24:24 166:16,17 167:11 186:13 188:7 217:24 243:5,8,12 247:22 251:8,14 252:3 276:12 300:7 311:13 328:15 332:15,21 333:5 340:1 346:6 <b>thing</b> 60:5 107:12 135:15 169:15 175:10 186:1 191:15 199:12 214:5 285:3 295:17 297:6 298:13 301:12 302:1 309:14 318:20 338:16 <b>things</b> 49:6 67:9 75:8 76:6 77:15 80:2 86:19 97:16 138:11 168:18 173:7 199:5 204:24 217:11 218:23 222:5 228:13 255:25 259:14 271:21 284:1 285:4 298:2 300:19 305:12,22 307:17 308:5 335:11 338:15 343:5 346:15 <b>thinking</b> 34:20 196:14 254:13 293:2, 4 <b>third-party</b> 116:22 <b>thought</b> 12:14 20:25 83:15 146:3 158:11 183:21,24 184:22 224:18 251:10 253:4,12 255:2 298:16 311:20 337:21 <b>thousand</b> 30:4 203:1 <b>three-part</b> 258:21 <b>three-pronged</b> 205:3 <b>tick</b> 31:14,19 213:10 <b>ticked</b> 171:25 <b>time</b> 5:5 14:18 31:20 42:3 74:2 80:14 83:1,25 84:12,13,17 91:9 95:5 98:16, 17 102:21 104:22 106:22 115:14,20 116:7 117:3 118:7 120:6 126:5 133:17,23 134:2 146:16 151:1,17 156:9 157:14 159:23 160:16 162:9 163:11,16 164:25 165:4 166:22 169:2,13 170:7,10 171:15,25 172:11 173:22,25 174:6 176:12 183:14 184:14 192:17,21 210:22 211:23 216:20 217:8,14,18 218:3,5 222:14 225:1 234:9 238:1,6 239:3 246:19	247:6,8 248:12 249:15 251:1,12 253:2 254:5,15 265:24 269:14 282:17,18,25 283:3,5,18 284:3,4 286:8 295:19 297:18,22 300:25 306:24 325:19 329:17 330:25 332:9 335:12 340:10,21 341:2,7 346:20 347:2 <b>times</b> 7:3,13 11:2,5,18 29:6 30:11 37:1 47:15 55:4 58:18 59:15 71:17 140:6,12 154:7 189:13 199:1 203:1 214:14 229:4 299:15,17,19 <b>timing</b> 75:15 261:21 <b>tint</b> 244:5 <b>tipped</b> 310:15 <b>tire-kicking</b> 270:21 <b>tired</b> 298:3 <b>title</b> 105:19 139:23 152:15 <b>titled</b> 28:22 <b>today</b> 36:22 78:15 199:12 204:18 220:25 226:6 230:6 236:2 269:10 283:11 331:9,13 341:13 346:20 <b>today's</b> 347:3 <b>TODT</b> 3:19 <b>told</b> 19:10 33:14 44:24 193:17 215:19 251:6 273:9 295:24 298:11 <b>tons</b> 209:9 <b>toolkit</b> 11:16 <b>top</b> 104:5 121:13,18,22 126:11 160:1 207:3 242:3 310:14 <b>top-line</b> 66:11 <b>topic</b> 73:21,25 128:10 <b>total</b> 87:15 108:22 337:11 <b>totaled</b> 209:8 <b>totality</b> 21:13 321:16 <b>touched</b> 36:8 51:14 60:3 100:25 <b>touches</b> 78:6 <b>trace</b> 299:11 <b>track</b> 167:17 <b>tracks</b> 229:19 <b>trade</b> 220:13,14,15,22 221:1 239:8 <b>traditional</b> 57:14 <b>Tran</b> 3:23 <b>transaction</b> 98:25 194:5 229:6 280:13 281:18 284:14 287:20 288:11,	16 289:17 320:25 321:6,15 <b>transactions</b> 288:18,22 289:20 321:12 <b>transparency</b> 106:16 <b>transparent</b> 106:8 <b>travel</b> 283:5 <b>treat</b> 25:6,17 39:22 43:9 70:7 191:5 334:24 335:4 <b>treated</b> 69:10 197:4 <b>treating</b> 191:9 202:13 337:19 <b>treats</b> 26:16 <b>trend</b> 170:9,10,13 171:12,15,24 173:15,19 174:3,5,6 175:6 213:19 214:21,23 215:23 216:20,25 217:14, 19 218:5,7 222:13 282:17,23,25 283:19 284:4 <b>trendline</b> 173:12 <b>trends</b> 171:16,25 176:12 283:21 <b>trigger</b> 212:13 <b>triggered</b> 77:14 <b>Triumph</b> 252:24 331:23 332:8 338:6 <b>trivial</b> 275:10 291:25 <b>trouble</b> 273:23 <b>true</b> 49:18 135:16,19 143:17 162:22 208:8 236:3 288:24 289:3 297:4 340:4 344:16,18 <b>trust</b> 96:25 <b>tune</b> 160:22 <b>turn</b> 10:24 105:7 108:25 121:21 140:25 151:22 157:25 168:22 194:19 207:2 231:5 266:17 328:20 <b>turned</b> 252:5 299:24 <b>turning</b> 57:22 300:3 <b>turns</b> 98:3 163:3 216:3 230:1 344:12 345:11 <b>two-part</b> 315:9 <b>two-year</b> 160:7,16 161:18 <b>tying</b> 243:21 <b>type</b> 83:19 84:6 109:2 110:12 270:2 275:7 276:2,23,24 277:14,23 280:4, 23 292:2 <b>types</b> 109:1,4 110:17 111:3,7 115:15 337:24
--	--	---

**typically** 10:20 11:16 33:7 298:20  
**Tyson** 99:14 138:12 149:8 230:24  
231:14 232:2 235:9 237:6,7,11 242:7,  
24  
**Tyson's** 104:7

---

**U**

---

**ultimately** 38:4 105:4 147:13,15  
157:3 187:9 212:8  
**unable** 10:11 11:7 12:23  
**unconcentrated** 132:13  
**undercut** 302:13 318:10,17 319:1  
**underlying** 43:22 128:20  
**undermine** 272:8  
**underproduce** 137:6  
**underproduces** 137:21  
**understand** 16:16 19:25 26:7,13  
33:22 35:4 36:13 41:12 42:9,14 51:2  
52:18 54:18 59:6,14 62:16 63:6,24  
71:22 72:4 73:7,8 80:4 82:1 91:24  
96:6 98:2 105:2 108:10 110:3,15  
114:4 116:1 117:20 120:6 128:15  
136:11 141:23 164:11 170:15 174:19  
176:18,23 178:22 180:14,19 186:17  
207:21 223:7 251:14 276:25 290:23  
297:25 307:13 316:17 317:18 319:12  
321:25 335:1 342:22  
**understanding** 10:23 16:20 33:2  
37:11,16 44:6 81:19 91:20 100:23  
107:3 111:4 115:6,17 116:5 132:14  
136:24 172:1 178:11 184:18 187:6  
190:24 191:25 206:5 211:7 225:2  
286:3 308:17 310:7 319:16  
**understood** 50:9 69:13 300:5  
317:24  
**uneconomic** 175:10  
**unexpected** 269:23  
**unexpectedly** 273:3  
**unexplained** 264:10 265:24  
**unfolding** 282:23 283:4,16  
**unilateral** 34:12 46:16 264:15  
**unilaterally** 188:5  
**uninterested** 225:8  
**unique** 161:7  
**unit** 292:20 293:14,24 298:16,17,23

**United** 89:16 101:10 132:9 169:1  
207:4,11,24 208:15 209:2 221:19  
226:20 227:4 259:16  
**units** 180:12 292:21,23 293:12,19  
294:2  
**University** 121:13,20,24 122:5  
285:19  
**unlagged** 186:25  
**unlawful** 17:20,22 19:1,20 23:23  
24:13 25:6,18 26:19 38:9,13 40:10  
189:7 201:14  
**unlike** 108:10  
**unprecedented** 154:5  
**unprofessional** 233:20  
**unprofitability** 94:3 164:22 165:15,  
23 167:15,17  
**unprofitable** 167:6  
**unreasonable** 12:20 160:23  
**unrelated** 212:3 240:9  
**unreliable** 13:12  
**unreportable** 14:21 93:5 100:14  
112:18 145:1 179:5 196:3 232:13  
242:13 253:8 269:3 339:4  
**unsuccessful** 311:3  
**update** 239:8  
**upset** 133:21 161:8,22  
**upstream** 82:7,16 85:21,22 89:7  
90:17,20 91:5,21 93:19 97:14 98:7,22  
99:1,2 130:6,9,11 131:5,11,13,18,24  
132:7,19 133:6,15,19,20,25 134:10  
136:14 141:19 142:18,23 143:2,9,10  
144:2 146:5 147:19 150:15 154:24  
158:2 159:17,18 166:9 168:6 169:12  
176:3 181:1 187:10 212:5,14,25  
232:12,22 236:21 237:17,20 242:21  
259:12  
**uptick** 170:24  
**upturn** 171:6  
**upward** 213:10 214:21 215:4 217:1  
218:7 267:11 271:22 272:6  
**US-PRODUCED** 216:19  
**USA** 224:8  
**usage** 178:3  
**USDA** 85:25 86:6 87:2,7 105:19  
107:4,15 108:5,10 111:5 112:9,22  
114:6,20,25 115:12,25 117:12

119:18,24 120:10,12 124:21 125:11,  
18,23 132:20 223:13 278:1,11,19,24  
308:13,22 309:8,13 329:11  
**USDA's** 4:10 105:20  
**user** 116:22  
**users** 4:10 105:20 346:8  
**utilize** 68:8

---

**V**

---

**vaccine** 104:20  
**vacuum** 148:1 155:13 188:13  
**Vague** 137:8 148:19  
**valid** 25:14,24 26:1,2 201:4  
**values** 211:24 287:19  
**variable** 24:22 57:13,16,24 69:7  
85:16 87:8 90:9,16,18,22,23 92:10  
94:25 104:25 154:21 156:15 157:17  
158:15,22 159:6 161:6 166:18 167:2  
182:8,9,11,15,24 184:7,10 185:6,18,  
21,24 186:8 202:21 204:20 212:22  
215:14 217:22 218:25 245:10 252:17  
255:13,19 270:8,16,17 273:2,16  
274:24 283:22 286:1,4 334:1 336:17  
**variables** 84:25 175:20 176:10,14,21  
177:4 217:20 219:13 226:8 229:16,25  
257:2 269:17 283:25 287:18 288:15  
337:24  
**variation** 185:16 186:23  
**variational** 184:21  
**variations** 168:7 281:22  
**varied** 249:14  
**variety** 43:18 227:12,14,24 228:18  
289:23  
**vary** 274:17,19 295:19,23  
**vast** 6:25  
**vastly** 106:15  
**verdict** 281:17  
**Verizon** 7:16  
**version** 110:24 112:8  
**versus** 83:19 99:7,23 101:11 117:5  
120:9 149:5 226:14 244:9 257:14  
261:20 277:2,3 293:10 294:19  
**vertical** 124:1  
**vertically** 89:6,16 98:21 99:20,21  
111:18 112:23 113:11 117:6 120:9

123:22 127:13,19 143:3 148:21,25 149:10,14,20 150:3 180:25	<b>whomever</b> 85:19	<b>wrote</b> 196:24,25 199:16 235:15 238:19 305:11
<b>video</b> 5:6	<b>wide</b> 289:23	<b>Y</b>
<b>view</b> 145:22 175:25 198:13 222:24 271:4 275:3	<b>widgets</b> 89:2	<b>year</b> 41:13 47:24 48:8 69:11 70:5,8, 17 71:4 72:2 98:16 124:25 126:7 154:16 195:5,7 207:6 209:8 214:8,19 230:2 239:16,18 241:6 247:8 248:15 261:25 262:3,10,11,21 327:2 331:21
<b>viewed</b> 339:18	<b>widow</b> 228:20	<b>years</b> 145:12 160:5 164:20 166:25 170:16,22 173:16 209:8 214:22 305:25 323:22 337:17,19 338:1
<b>violation</b> 9:7,17 27:5 37:23 340:9	<b>wield</b> 146:3	<b>yes-or-no</b> 55:13,23 56:2
<b>virtue</b> 136:13,14	<b>wild</b> 153:9	<b>yields</b> 179:1,11
<b>virus</b> 104:15 105:1 158:16,24 161:21 182:22,25 183:25 185:4,5,23 186:1	<b>willy-nilly</b> 336:20	<b>You4</b> 174:8
<b>viruses</b> 104:14,18	<b>win</b> 327:8	<b>younger</b> 242:2 243:24
<b>visibility</b> 301:14	<b>window</b> 177:14	
<b>volume</b> 82:10,23 142:22	<b>winter</b> 329:12	
<b>volunteered</b> 318:14	<b>wipeout</b> 339:7	
<b>vouch</b> 86:4	<b>wisdom</b> 22:21	
<hr/>		
<b>W</b>		
<b>wages</b> 24:7	<b>Wooldridge</b> 271:1,4	
<b>wait</b> 158:7	<b>word</b> 32:25 68:13 71:9 77:10 88:2 103:21 116:16,18 141:18 207:18 227:15 256:6 306:11 316:22 331:14 343:8,9	
<b>wanted</b> 24:3 100:22 116:10,24 120:18 150:1 183:24 186:14 242:18 265:11 275:6 277:21 278:16 279:11, 14 298:1,13 299:8,11 342:25 346:17	<b>words</b> 39:14,19 95:18 186:6	
<b>wanting</b> 317:18	<b>work</b> 15:20 44:16 45:12 51:20 240:16 268:9 300:13 305:24 317:22	
<b>Washington</b> 3:8	<b>worked</b> 7:17 310:9 317:19 319:18	
<b>waves</b> 168:3	<b>working</b> 44:9 122:8 196:9	
<b>ways</b> 42:23 54:14,16 75:18 88:16 94:17 95:1 97:5 128:22 163:5 166:10	<b>works</b> 84:11 173:9 329:10	
<b>weaned</b> 72:17 94:21	<b>world</b> 20:13 39:21,25 40:3,5,9,14,20 41:3,7,18,22,25 42:1,4 43:11 56:18, 20 60:8,9,11,19,20,21,22 61:1,10,13 62:1,21 63:2,3 64:2,4,18,19 161:13 162:7 191:11 192:25 193:2,6 194:1 200:21,23 203:2,3 215:1,10 216:17 230:14 243:7 254:3,7 256:15 257:13, 14,16,24 258:10,13 260:12,13,14,23 261:7 288:13 289:9	
<b>weaner</b> 93:15 94:20 138:10	<b>worst</b> 160:7	
<b>week</b> 262:15,16 267:8	<b>worthy</b> 153:15	
<b>weight</b> 72:18,24 81:20,21 82:25 198:19	<b>wrap-up</b> 341:1	
<b>weights</b> 74:4 106:24	<b>writ</b> 278:25	
<b>weird</b> 312:14	<b>write</b> 11:6 234:5 245:3	
<b>wheels</b> 70:12	<b>writing</b> 234:8 265:20	
<b>White</b> 143:24 144:18,23 145:5,11 146:13 172:4	<b>written</b> 36:14 316:23 344:9 345:5	
<b>wholesale</b> 91:7 106:9 278:24 292:5 328:1	<b>wrong</b> 198:11 251:25 268:23 269:17 322:15 336:21	
<b>wholesaler</b> 277:3 328:1		
<b>wholesome</b> 248:4		